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ABSTRACT

This research monograph, written for community officials and planners of drug abuse prevention programs, presents straight line projections on the possible extent and kinds of nonmedical drug use for young adults (18-25 years old) that can be expected in the future. Projections are made based on current young adult drug abuse and population trends. The purpose of the study and methodologies are described in the introductory chapter. Chapter 2 comments on demographic trends in family status, education, income, geographic distribution, race, ethnic composition, total population size, and age composition. In chapter 3, sources of data on drug abuse are reviewed and evaluated for their usefulness in making future projections. The remainder of the monograph presents the projections, in text and tables, for marijuana, inhalants, hallucinogens, cocaine, heroin, and other opiates. Data are given for total numbers and for percentages of 18 to 25 year olds who may be expected to use these drugs in 1985, 1990, and 1995. Trends are further tabulated by sex, race, and residence in metropolitan or nonmetropolitan areas. Numerous tables and an annotated bibliography on demographic trends and forecasting techniques supplement the text. (BL)

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Demographic Trends and Drug Abuse, 1980-1995

Editor:

Louise G. Richards, Ph.D.
National Institute on Drug Abuse

NIDA Research Monograph 35

May 1981

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Public Health Service
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5600 Fishers Lane
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The sources of percentages in tables showing young adults' drug use in 1974, 1976, and 1977 are unpublished detailed tabulations appended to the NIDA National Survey reports for those years.

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Foreword

Changes in the composition of a nation's population can have profound effects. The "baby boom" of the 1950's and 1960's in the United States necessitated adjustments throughout our society. In the eyes of some, it exacerbated a multitude of youth-related problems, those of drug use and abuse among them.

In the 1980's, a major change already discernible will be a decrease in the size of the youth population. Because young adults 18 to 25 years old are the group at greatest risk for drug abuse, this decrease is likely to have a strong impact on future drug abuse patterns, with important implications for the planning of prevention and treatment programs. It is desirable, therefore, to find out as much as possible about the extent and kinds of nonmedical drug use we can expect to see at various times in the years ahead.

Methods of predicting the effects of population change vary from simple projections of numbers in various age groups to elaborate "modeling" of a problem, using multiple factors that may affect it. The study conducted for the National Institute on Drug Abuse presented in this monograph is a first step into this territory and uses the simplest method, straight line projection. One chapter comments briefly on many aspects of demographic trends, among them family status, education, income, geographic distribution, and race and ethnic composition, as well as total population size and age composition. Sources of data on drug abuse are then reviewed and evaluated for their usefulness in projecting nonmedical drug use among young adults.

The greater part of the monograph, however, presents the projections themselves in text and tables on marijuana, inhalants, hallucinogens, cocaine, heroin, and other opiates. Data are given for total numbers and percentages of 18- to 25-year-olds who were users of each group of drugs in the recent past and who may be expected to use these drugs in 1985, 1990, and 1995. The trends are also tabulated by sex, race, and residence in metropolitan

or nonmetropolitan areas. The monograph makes available information that will be interesting and useful to many whose work is concerned with drug users now and in the future. Among these are community officials, planners, and those who design or direct drug abuse prevention programs.

We hope that further work will be done employing additional factors to delineate the future shape of nonmedical drug use with greater precision. Rational predictions of this type will create a better basis for our response to the continuing problem of drug abuse.

Marvin Snyder
Director, Division of Research
National Institute on Drug Abuse

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Chapter 1

Introduction

Overview of the Report

The study reported here was undertaken to project drug abuse[1] for young adults in future years by examining age trend data in conjunction with data on the nonmedical use of drugs. Previous research has demonstrated age to be strongly associated with the nonmedical use of drugs, with the greatest incidence occurring in the 18-25 age group. Since the number of 18-25 year-olds, or young adults, will decline in the next 15 years, it can be hypothesized that the number of young adults abusing drugs will also decrease. This report presents the numbers of young adults expected to be abusing drugs at several points in the future as indicated by a simple technique using projected trends in population and drug abuse.

The report is organized into five chapters. This chapter outlines the purposes of the study and reviews the methodology employed for making projections of the number of young adult drug abusers. Chapter 2 reviews the changing structure of the population. Several drug abuse data sets are reviewed in chapter 3, which specifies the data to be used as the basis for projecting future drug abuse. The fourth chapter presents projections of the number of young adult drug abusers in 1985, 1990, and 1995. The projected trends in nonmedical drug use by young adults are summarized in the final chapter and recommendations are made for additional research.

Purpose of the Study

The general purpose of this study is to predict future nonmedical use of drugs based on a comparison of two data sets: (1) estimates of drug abuse at several points in time, and (2) the projected size of the young adult population at several points in the future. Since nonmedical drug use is currently most frequent among young adults (18-25 years), and there is evidence that the size of this age group will be declining, it is quite possible that the number of young adults abusing drugs may decrease.

This possibility has strong implications for treatment programs serving drug abusers, education programs geared to high risk populations, and deployment of forces to reduce availability of illicit drugs. Only when armed with projections of future drug abuse can the National Institute on Drug Abuse (NIDA) make rational plans for future treatment and prevention programs targeted on young adults.

A review of literature on population changes and a review of drug abuse data sets will be summarized in chapters 2 and 3, respectively, so that the reader may have a clear understanding of what data were used to make future projections of drug abuse.

Methodology for Making Projections of Population Size and Drug Abuse

The decision was made to project the number of young adult drug abusers at three points: 1985, 1990, and 1995. Population projections for the 18-25 age group have been taken from the Census Bureau's Series II published projections of the total population (U.S. Bureau of the Census, 1977b).[2] Several precautions should be taken in interpreting the Series II projections used in this study and presented in appendix A:

- Actual fertility levels might run slightly below the level assumed for the Series II projections.
- Mortality levels for people in the 18-25 year-old category are increasing. The increases are not so large as to affect the Series II projections markedly, but they do run counter to the assumptions upon which the Census Bureau's projections are based.
- Official estimates of the current number of young adults are probably below the actual figure built into the Series II projections.

Population projections for 18-25 year-olds and for several subgroups of 18-25 year-olds come directly from the Census Bureau Series II estimates. However, the population projections for large metropolitan, other metropolitan, and nonmetropolitan areas, presented in appendix A, do not come from an official source. The Census Bureau does not prepare such projections by age grouping. Therefore, a ratio method was used to make simple projections for these groups. This methodology required two simplifying assumptions:

- That the metropolitan designations used by the NIDA surveys are not substantially different from a current Census Bureau trichotomy of Standard Metropolitan Statistical Areas (SMSA's) of one million and larger, SMSA's under one million, and nonmetropolitan areas.
- That the proportion of the 18-25 year-old population (NIDA survey categories) in the three areas will not differ markedly from the proportions of 18-25 year-olds (Census Bureau categories) in 1977.

Once population projections had been assembled, the next step was to develop projections of the number of young adult nonmedical drug users in 1985, 1990, and 1995. Several alternative approaches to projecting future levels of drug abuse were reviewed:

- Using a level straight-line approach, one could apply the most current levels of reported drug abuse to population projections in order to project the numbers of drug abusers at future points in time.

- Where trend data are available, one could study the direction and magnitude of change in the level of drug abuse over time and assume that this same pattern would repeat itself in the future. This analysis enables one to modify the most recently reported level of drug abuse, and multiply the modified percentage by population projections, to project the number of drug abusers in the future.

- A third approach would be to identify a number of demographic and socioeconomic factors which might affect future patterns of drug abuse. Each factor (e.g., the changing structure of families or changing labor market conditions) then could be analyzed and a set of hypotheses developed expressing its relationship to drug abuse. Statistical equations then could be developed to express these relationships, and the resulting equations could be used to generate another set of projections of drug abuse.

The projections of young adult drug abusers presented herein are developed using only the first approach. The second approach can be used with confidence only when data are available for a series of points in time. Currently, only data on marijuana use are available, and comparable figures are available only for three different points. Predictions based on the third approach will not be presented here; however, the potential of this approach for drug use projections will be discussed in chapter 5.

The straight-line projection technique is based on the assumption that the most current rates of drug abuse reported will remain relatively stable in the future. For this study, the most current data available was the National Survey on Drug Abuse conducted in 1977 for the National Institute on Drug Abuse. Using the straight-line projection technique and 1977 data will result in conservative estimates because the preliminary results of the 1979 National Survey indicate growing rates of drug abuse among young adults. However, these estimates will be useful in supporting broad planning decisions.

The following chapter discusses the changing structure of the population and some related considerations in projecting future drug abuse for young adults.

FOOTNOTES

[1] For purposes of this study, the term "drug abuse" refers to nonmedical use of drugs, as used by the National Institute on Drug Abuse in conducting its national surveys on drug abuse.

[2] References in chapters 1 and 2 appear in the Annotated Bibliography of Selected Materials on Demographic Trends and Forecasting Techniques, which begins on page 70.

Chapter 2

A Review of Population Trends

INTRODUCTION

In the recent past the shape of the population in this country has undergone several major changes. The postwar "baby boom" and more recent "baby bust" are generally well known; however, the important implications of these broad fertility swings are not widely appreciated. Lower death rates, migration to the South and West, and declining growth rates for major cities have all served to distinguish America in the 1970's from previous decades. The changing status of women and minorities has influenced trends in educational attainment, economic status, and family life.

Many of these changes caught observers by surprise, but improvements in the availability of demographic data and the growing sophistication of demographic research have enabled demographers to analyze these trends and assess their impact on many aspects of social, political, and economic life (U.S. House of Representatives, Select Committee on Population, 1978).

The overview of the population changes in the United States is presented here to help policy analysts and program planners in the drug abuse field to understand past and future demographic trends. First, it reviews the strengths and weaknesses of demographic data and discusses demographic forecasting techniques; second, it reviews past and anticipated trends for several demographic variables. (Appendix B includes charts and tables depicting some of the trends discussed in this chapter.)

Included in this chapter are comments on the effects that various demographic trends may have on drug abuse patterns; however, the nature of these relationships is not documented.

Quality of Demographic Data and Forecasts

A great deal is known about the size, growth, and composition of the U.S. population because of rather thorough decennial censuses and virtually complete registration of vital events--i.e., births, deaths, marriages, and divorces. In comparison with other social and behavioral sciences, the data of demography are known to be highly valid and reliable. Some aspects of our statistical system are not as strong as others, however. Specifically, a small but significant portion of the population is missed in the decennial census, and our statistical system does not provide for the close monitoring of migration:

- The Census Bureau estimates that the 1970 Census missed 2.5 percent of the total population and that this undernumeration was disturbingly high for some groups. For example, almost

20 percent of all black males aged 25 to 44 were missed by the 1970 Census (U.S. Census, 1975b).

- Estimates of the number of illegal immigrants and the number of citizens, resident aliens, and undocumented aliens who leave the country permanently are deficient (Keely 1977; Siegal 1978).

A thorough assessment of the changing geographic distribution of the population--the result of millions of individual moves--can only be made with data from the decennial census which will be released at the State and substate level in late 1980. Yet even as we near the end of an intercensal period demographers are able to estimate the impact of migration on population change at the State and local level. One data source is a Census Bureau program which, in cooperation with State and local governments, analyzes data on school enrollment, utility hookups, housing starts, and findings from sample surveys to produce annual population estimates for each county. Increasingly refined techniques have been developed over the years to estimate future demographic trends. Nevertheless, demographic forecasting, like any technique, is prone to error. It is not the intent of this chapter to review all forecasting techniques; however, a few conceptual distinctions will be made to provide a background for further discussion of the limitations of these techniques. Demographers shy away from speaking of predictions, because past efforts to forecast the future have seldom proven to be accurate. Therefore, they speak in terms of estimates, projections, and forecasts (Shryock and Siegal 1975). An estimate is usually made of an unknown number pertaining to the present or past. For example, drawing on the 1970 Census and other data sources, the population of New York State in 1979 can be estimated with considerable accuracy.

The technique of population projection, which refers to the future, requires that assumptions be made about future demographic trends. Mathematical formulae are used to apply these assumptions to a current population count or estimate. This initial population is normally disaggregated by age and sex. The projection method chosen (several component methods are currently used) then diminishes the population according to a given age-sex-specific mortality schedule and augments it according to a given fertility schedule. Finally, adjustments are made according to a net migration schedule (Shryock and Siegal 1975). For example, the most frequently cited population projections for the U.S. are those published periodically by the Census Bureau. The most recent set consists of three different projection series to the year 2050 for the total U.S. population disaggregated by sex and five-year age groups (U.S. Bureau of the Census 1977b). All three projections assume the same levels of net immigration and mortality, but each is based on a different assumption about future fertility.

By publishing three different projection series, the Census Bureau avoids making an official forecast about the future course of population growth. In effect, the Census Bureau is saying: "These are the demographic implications of three different plausible assumptions about the components of population growth." The reluctance of many demographers to designate a particular projection series as their best guess is based on the fact that demographic patterns are affected by many variables such

as economic growth which are not incorporated in demographic projection models. By offering a range of projections the analyst might avoid subsequent embarrassment, but the danger of this approach is that the layperson reviewing a group of projections is often the one who chooses a particular projection as "the best" forecast.[1]

Econometricians have attempted to bridge the gap between the rigorous but restricted methodology of projection and looser forms of crystal ball gazing which attempt to anticipate all social and cultural trends affecting population change. The result is a new technique referred to as demographic modeling (Reynolds 1979). Using this technique, if a forecaster believes fertility is affected by family income, an equation expressing this relationship can be estimated and incorporated into a demographic model. Fertility would then be forecast as a function of economic growth and age structure.

Demographic modeling may also be used to forecast the populations of subnational areas which are strongly influenced by migration flows. Here an area's net migration is cast as a function of the growth of employment opportunities in the local economy. Other processes such as labor force participation and family formation can be incorporated into the model to produce a forecast of the composition of the population, e.g., the number of three-person households in a given income category. Forecasts for specific subgroups such as this normally are not made using conventional techniques of population projection.[2]

A demographic forecast produced by complicated techniques can sometimes but not always produce accurate results. In the short run a national forecast is unlikely to be seriously in error because there is so much inertia in demographic trends. But when projections are made for longer periods or for particular segments of the population, history can outrun the assumptions on which the forecast is based (Pittenger 1979). A good case in point is the Bureau of Labor Statistics' attempts to forecast labor force participation rates. Each series of projections produced in recent years has become obsolete shortly after publication because women have been entering the labor force at a greater rate than that anticipated by any of the projections (Flaim and Fullerton 1978).

Often it is useful to prepare a series of projections and consider the range of alternatives produced. This approach demonstrates how a variable of interest is affected by different assumptions underlying the projections. Thus, population projections allow one to place reasonable bounds on the magnitude of future trends. For example, if the assumption was made that the total fertility rate would not go higher than 2.7 or lower than 1.7 (the levels used in the Census Bureau's high and low projections) then one could estimate that the total U.S. population should not be greater than 283 million nor less than 246 million in the year 2000, assuming the mortality and immigration assumptions hold.

The next section reviews past and future demographic trends and, where plausible, their implications for future drug abuse patterns.

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Demographic Trends: Past and Future

A comprehensive treatment of recent past and near future demographic trends is beyond the scope of this report; rather this report will comment on trends in the following areas: total population size, fertility, mortality, immigration, age composition, family status, education, income, geographic distribution, and race and ethnic composition.

Total population size

The U.S. population has grown from 151 million in 1950 to an estimated 222 million in 1980--a 47 percent increase in three decades.[3] Population growth will be slower in the next decade, probably below one percent per year, but the total population should be between 240 and 250 million in 1990. The principal components of population change--fertility, mortality, and immigration--have each undergone changes themselves in recent decades. These changes will have important effects on population trends in the future.

Fertility

American fertility in the early post-war years was characterized as the "baby boom," with the crude birth rate soaring to 25 per 1,000 total population in 1957. Since then the birth rate has declined, with only slight interruptions, to approximately 15 births per 1,000 in 1979.

The level of fertility has a marked impact on population size and composition, but based on the experience of past decades it is difficult to anticipate changes in this volatile variable. The current consensus among demographers is that low fertility is here to stay. Those who foresee continued low fertility argue that the costs of childbearing (the commitment of money and time on the part of parents), the availability of effective birth control, and the changing role of women and the family militate against the high levels of fertility seen in the postwar baby boom (Westoff 1978).

But there are some analysts who disagree with this view. The most prominent is Richard Easterlin. In his presidential address to the Population Association of America, he argued that improved economic opportunities for young families and the demographic echo of the baby boom will result in a resurgence of fertility in the 1980's (Easterlin 1978).[4] Those who foresee continued low fertility in the future acknowledge the potential for a substantial echo effect, but feel that other social and economic forces will dampen, if not nullify, its impact.

Easterlin believes that the economic-demographic cycle which produced the baby boom of the 1950's and the baby bust of the 1970's will have a wide range of ameliorative effects on American society in the 1980's. Improved economic opportunity for young adults will mean not only higher marriage and fertility rates but lower rates of divorce, unemployment, and crime. A clear implication of Easterlin's theory is that young adults will be too absorbed in occupational advancement and family life to engage in drug abuse to the extent that their older brothers and sisters did in the 1970's.

If the labor market for young adults does not improve to the extent he envisions, or if counteracting social and cultural trends prevail, his expectations for the 1980's could prove to be overly optimistic. Yet regardless of his overall theory, drug abuse trends should be favorably affected by the decline in the number of young adults which will occur in the 1980's.

One aspect of fertility which has drawn increased attention in recent years, and which may have a significant relationship to drug abuse, is teenage fertility. In 1976, births to teenage mothers constituted 18 percent of all live births. Relatively few of these mothers were married at the time of conception. Despite the fact that teenage mothers account for a growing proportion of all births and that the illegitimacy rate for teenagers is increasing, the teenage birth rate (i.e., the number of births per 1,000 women 15-19) has actually declined from 82 in 1950 to 68 in 1970 and 54 in 1976. The growth of sex education and the increased availability of birth control may lead to a further decline in this rate in the next decade.

The impact of various assumptions about fertility on the total population can be appreciated when one examines the Census Bureau's high, medium, and low population projections. Using the high projection, there would be 5.1 million births in 1990; the medium projection, 4.0 million births; and the low projection, 3.2 million births.

Unborn children will not reach the prime ages for drug abuse until the end of this century. Nevertheless, the fertility rate bears watching because it implies different lifestyles for adults. High fertility rates would suggest that most young adults would be married and supporting families and, thus, it is speculated that they would not be prime candidates for drug abuse. Low fertility would suggest that larger proportions of young adults will not be raising children and, thus, may be more prone to risk-taking and experimentation.

Mortality

Death rates have been decreasing for all age groups[5] so that the expectation of life at birth reached an all time high of 73 years in 1977. The leading causes of death among teenagers and young adults are accidents, suicide, and homicide. Therefore, future mortality levels for this age range will depend more on social and cultural variables than advances in medical care. It is difficult to envision any changes in mortality that will have a notable effect on the number of people reaching the prime ages for drug abuse by the end of this century. Recent declines in mortality rates are more likely to benefit the elderly than young adults (Rice 1979).

Immigration

Net immigration contributed relatively less to population growth in the recent past than it did in the early part of this century. Nevertheless, net legal immigration has been averaging around 362,000 in recent years, accounting for a fifth of total population growth. When illegal

immigration is taken into account, the total contribution of immigration to population growth may be substantially higher.

Despite widespread interest in the number of illegal immigrants, no generally accepted estimate of their number exists. Estimates of the numbers of aliens living illegally in the U.S. range from four to twelve million. Estimates of the flow of illegal entrants in a given year also vary widely. The frequent border crossings of many illegal immigrants from Mexico might create the impression of a larger number than actually exists. On the other hand there appears to be a substantial number of aliens who enter legally--as tourists and students--but who overstay the term of their visa and become undocumented residents (Keely 1977; Siegal 1978).

The contribution of immigration to future population size is difficult to predict. If immigration were to increase and fertility to remain low, the contribution of immigration to overall population growth would increase. Whatever its rate, immigration will probably have a greater impact on the growth of prime drug abuse groups than on the growth of the total population, because immigrants are disproportionately young and male.

Immigration has become a highly charged issue in recent years.[6] Aside from its potential contribution to population growth, immigration may be related to drug abuse in other ways. There is no concrete evidence to document the relationship between immigration and drug abuse; however, several factors should be investigated by future research efforts, e.g.:

- A substantial proportion of immigrants come from Latin America, Asia, and the Carribean--important sources of illegal drugs. This factor may or may not influence drug trafficking and abuse patterns.

- There are two competing stereotypes of immigrants which relate to drug abuse. In one view, immigrants--and especially illegal, Hispanic immigrants--are marginal members of society with a greater than average propensity to illegal and antisocial behavior. The competing view is based on the fact that migration--legal and illegal--is selective and that migrants tend to be especially achievement oriented. Furthermore, in an effort to avoid detection, illegal immigrants are more likely than others to abstain from illegal behavior such as drug trafficking and abuse.

Age composition

Many forms of social behavior are age specific. The age structure of a population reflects past trends in fertility, mortality, and immigration. The bulges and troughs in the U.S. age structure (as shown in chart 1, appendix B) can be attributed to the wide swings in fertility in previous decades. The relatively small numbers of children born during the Depression, the large number born in the 1950's, and the fewer births of recent years mean that a given age group, such as young adults, can contract, expand, and then contract again in the course of a few decades.

At the depth of the Depression, there were only 2.3 million children born (1933). At the peak of the baby boom this number reached 4.3 million (1957). The most recent low was 3.1 million births (1975). The age structure of the population in the future years can be forecast with considerable accuracy, except for those in the youngest age groups, who have not yet been born. Not only will the baby boom bulge continue to pass through the age structure well into the twenty-first century, but smaller cohorts born in the 1960's and early 1970's will be experienced as a deficit for years to come. Yesterday's smaller numbers of school-aged children are now confronting military recruiters and college admissions officers. In the 1980's, employers and home builders will be seeing these smaller cohorts enter the labor force and establish families. Because drug abuse is most prevalent among teenagers and young adults, the shrinking of these age groups in the near future could result in a decrease in drug abuse independent of other social changes or preventive actions on the part of authorities. Thus, in monitoring future trends, it is important to look beyond overall levels of drug abuse to age-specific rates, which will give a truer picture of change.

Family status

A variety of demographic data shows that the living arrangements of Americans are undergoing important changes and that family structure is neither as uniform nor as constant as it once was. Three important changes bear mention.

First, fewer people are marrying at the young ages common in the 1950's. As recently as 1960, 72 percent of all women 20-24 had entered their first marriage. By 1977 this figure had dropped to 55 percent (Glick 1978).

Second, in spite of the high level of teenage fertility and out-of-wedlock births, more young people are postponing or foregoing parenthood than did so in the recent past. A higher proportion of couples are also limiting their families to two children. In 1960 only half of all births were first or second children; by 1976 this proportion had increased to 75 percent.

Third, divorce is more prevalent today. If the present level of divorce persists, it has been estimated that 40 percent of recent marriages will end in divorce (Glick 1978).[7]

Future trends for these variables are difficult to predict. Much depends on whether the effects of the recent sex role "revolution" have been largely absorbed or whether we are in store for additional substantial changes in what men and women expect from work, marriage, and parenthood. A leading expert in family demography, Paul C. Glick, has suggested that family demographic trends will change less radically in the near future than they did in the recent past (Glick 1978).

Education and income

When broadly defined, demography goes beyond an analysis of variables directly related to population change and encompasses compositional factors such as education and income. Substantial improvements in

education and income levels during the 1950's and 1960's have slackened in recent years. By 1970, 34 percent of all 18-21 year-olds were enrolled in college, but this figure dropped to 32 percent by 1978. In the last 10 years the proportion of young males 20-21 enrolled in college has fallen almost 10 percentage points--from 44 percent in 1967 to 35 percent in 1977--while the participation of females increased from 25 percent to 29 percent.

The substantial gains in family income which characterized the 1950's and 1960's have moderated in recent years. When inflation is controlled median family income increased 4.2 percent per annum from 1950 to 1970 but by only 0.6 percent per annum since then.

Two important demographic changes should be taken into account when interpreting these figures. First, the number of earners per family has increased in recent years. Had large numbers of wives not entered the labor force family income would have advanced much less. Measures of family or household income can be misleading, however (Slater 1980). Per capita income levels have risen more rapidly than family income as family size has declined--by 2.0 percent per annum since 1970. Demographic trends seem to favor improved income levels in the 1980's as the labor force matures. Nevertheless, the rate of increase will be strongly affected by political and economic factors outside of the purview of demography.

Geographical distribution

The geographical distribution of the population has changed continuously over the years as Americans have sought new opportunities. During the 20th century, the industrialization of the American economy has been accompanied by a shift of population from rural areas (often communities in the South) to the major metropolitan areas of the North and Midwest. These migration patterns have now been superseded by new population shifts which will have important implications for the distribution of the population in coming years (Morrison 1978). The South and West are now the most rapidly growing regions, and population is declining in many older central cities and their immediately surrounding suburbs (Birch 1978; Guest 1979).

Because young adults migrate more frequently than other age groups, it will be difficult to anticipate with great accuracy the future geographic concentration of those prone to drug abuse. However, the continuing redistribution of the American population in coming decades can be monitored closely with the aid of demographic analysis.

Blacks and Hispanics

An analysis of drug abuse trends must consider distinctions of race, ethnicity, and class. Good data exist for analyzing virtually all demographic trends separately for blacks and whites, and more information is becoming available for Hispanics.

In recent decades, the black population has grown more rapidly than the white due to higher fertility, although fertility levels recently reached an

all time low for blacks. Using the Census Bureau's medium population projection, the black population should reach 30 million in 1990, or 12.2 percent of the total population. This would reflect only a slight increase in the black proportion of the total population, estimated at 11.2 percent in 1979.

The massive shift of the black population from the rural South to the metropolitan North has slowed in recent years, and blacks have begun to move to the suburbs. Nevertheless, blacks remain more concentrated in central cities than whites--58 percent vs. 29 percent in 1970--and pervasive residential segregation is not expected to disappear in the near future.

Educational opportunities for blacks have improved markedly in recent years. By 1977, college enrollment for persons 18-21 years old was 33 percent for whites and 26 percent for blacks. However, income statistics show that major economic disparities remain. Median family income for whites was $16,740 in 1977 vs. $10,142 for blacks. Unemployment rates for young black males are notoriously high. For those 16-19, the rate was 37 percent in 1977, substantially higher than the 15 percent rate for whites. For those 20-24, the rates were 22 percent and 9 percent, respectively.

The Hispanic population, estimated at 12.0 million in 1978, has been identified as the most rapidly growing minority in the United States. The Census Bureau does not prepare separate projections for the Hispanic population. Over half are of Mexican origin, and 15 percent are Puerto Rican. Hispanics are disproportionately concentrated in the Southwest, Florida, and the large metropolitan areas of the North. Twenty-nine percent of the Hispanic population is in the young adult age group (18-34), compared with 28 percent of the total population. Median family income of Hispanics was $10,300 in 1977, roughly equivalent to that of blacks but substantially below the level of all families ($16,009).

Conclusion

The above review highlights several important demographic trends. In many cases future demographic trends can be anticipated with the aid of population projections and other forecasting techniques. Some changes, such as improved mortality levels for the elderly, will probably have little effect on patterns of drug abuse. Others, most notably the declining number of young adults, are likely to have a strong impact on future drug abuse patterns. A thorough understanding of demographic trends and demographic forecasting techniques, combined with information on demographic correlates of drug abuse, should be very useful for those concerned with future trends in this problem.

FOOTNOTES

[1] Currently fertility levels are slightly below the level assumed in the Census Bureau's most recent medium level projections (Series II). Peter Morrison, a noted demographer at the Rand Corporation, recently said that he expects fertility to remain slightly below that assumed in the Series II projections in the 1980's (remarks at the Population Resource Center, 10/16/79).

[2] The Census Bureau does publish four series of household projections (U.S. Bureau of the Census 1979) and income projections will be published in 1981. Labor force projections are regularly published by the Bureau of Labor Statistics (Flaim and Fullerton 1978), and the National Center for Education Statistics publishes school enrollment projections biannually (National Center for Education Statistics 1978).

[3] Statistics cited in the remainder of this paper have been taken from Census Bureau sources unless otherwise noted. Most statistics for recent years are collected in the Statistical Abstract of the United States (U.S. Bureau of the Census 1978) or are available in the P-20 series of Current Population Reports (U.S. Bureau of the Census 1979b). Data for earlier periods are found in Historical Statistics of the United States (U.S. Bureau of the Census 1975a). Population projections are generally from Projections of the Population of the United States: 1977 to 2050 (U.S. Bureau of the Census 1977b).

[4] This "echo effect" refers to the fact that the large number of children born during the baby boom are now reaching the prime childbearing years.

[5] There has been a slight upturn in mortality for teenagers and young adults in the last few years.

[6] The recently established Select Commission on Immigration and Refugee Policy is expected to recommend changes in immigration and refugee policy. New policies could markedly affect the number of immigrants in coming years.

[7] This includes both first marriages and remarriages, the latter of which are more prone to divorce.

Chapter 3

A Review of Drug Abuse Data Bases

INTRODUCTION

This chapter will identify and describe briefly data sources which may be used to project nonmedical drug use among young adults in future years. A wide variety of sources have potential utility in this regard. They range from individual studies conducted by local school districts or States to major national surveys involving thousands of respondents.

Because of the proliferation of research on drug use in recent years, it was necessary to place some limitations on the data to be presented here. First, it was decided that since a complete review was conducted in 1974 (Glenn and Richards),[1] it was unnecessary to duplicate those efforts. (See Broecker and Berg, 1972, for a review of earlier studies.) The studies reviewed here are more recent and, with the exception of the earliest National Surveys, were not covered in the 1974 review.

Second, this review is limited to those data bases which are national in scope. State and local surveys have severe limitations for purposes of making national projections of nonmedical drug use. For example:

1. The definitions used for nonmedical use often vary from one local or State survey to another.

2. Various local and State surveys are conducted in different time periods, so that it is often difficult to piece together a national profile.

3. The use of different methodologies in developing estimates limits the possibility of developing comparable results from one geographic region to another.

For these reasons, it is virtually impossible to combine data from several independent studies at disparate locations in the U.S. to form national estimates of the number of nonmedical drug users.

Finally, wherever possible, this literature review focused on data sources describing the youth and young adult populations, since these are the groups most at risk for drug abuse.

There are three broad categories of data describing the prevalence of nonmedical drug use:

1. Treatment-oriented data systems, which compile statistics based on individuals who have sought care;

2. Surveys designed to determine the extent of various types of drug use among specific populations;

3. Federally sponsored surveys of the general population which are national in scope.

In order to support comparisons of different data sources, a standard format was adopted for describing each data source, in terms of the following parameters:

1. The purpose, date, and sponsor of the data source;
2. Respondents, sample size, and sample design;
3. Type of drug investigated;
4. Highlights of the results/findings; and
5. Limitations of the data base in terms of its potential usefulness for projecting nonmedical drug use among young adults.

I. TREATMENT-ORIENTED DATA SYSTEMS

Six treatment-oriented data systems were studied:

1. Drug Abuse Warning Network (DAWN)

Purpose. Project DAWN is a Federal program jointly funded by the Drug Enforcement Administration (DEA) and the National Institute on Drug Abuse (NIDA). DAWN has been in existence since 1972 and was established to monitor the consequences of drug abuse using two indicators, emergency room visits and deaths.

Respondents and Sampling. DAWN collects its information through episode reports provided by selected hospital emergency rooms, crisis centers, and medical examiners. In order to be eligible, emergency rooms must:

- Be open 24 hours per day;
- Be located in non-Federal short-term general hospitals (specialty hospitals, hospital units of institutions, and pediatric hospitals are excluded); and
- Have at least 1,000 patient visits to the emergency room per year.

At the end of 1978, over 900 facilities were supplying data to the program.

Reporting facilities are concentrated in 24 Standard Metropolitan Statistical Areas (SMSA's) which are not randomly selected but are chosen to account for approximately 30 percent of the population of the U.S. in geographically diverse locations.

Drugs Investigated. DAWN distinguishes between drug "episodes" and drug "mentions." An episode is a contact with a facility or a medical examiner for a drug-related emergency. A "mention" represents a drug involved in an episode; there may be one or more drugs mentioned for each episode.

DAWN has a vocabulary of approximately 3,000 substances which have been mentioned in relation to incidents of drug abuse. These substances are grouped into 99 therapeutic classes based on the National Drug and Therapeutic Index.

Information Collected. DAWN focuses on the drug users and the drugs used by having a reporter in each participating facility complete a report for each drug abuse contact.

Data/Results. DAWN results are presented system-wide as well as by SMSA. Highlights from the October-December 1978 quarterly report include:

- In the quarter October - December 1978, the frequency of mentions by therapeutic class was: tranquilizers (22 percent), alcohol in combination (13 percent), nonnarcotic analgesics (10 percent), nonbarbiturate sedatives (8 percent), and narcotic analgesics (8 percent). This order has remained the same since the quarter January - March 1978.

- The trend of marijuana mentions peaked in April 1978 and steadily declined in the remainder of 1978 to reach the 1977 level.

- Of the 745 deaths reported, 83 percent were drug-caused. The five drugs most often associated with drug deaths were, in order, alcohol in combination, d-propoxyphene, heroin/morphine, diazepam, and secobarbital.

- Together the hallucinogen PCP and PCP combinations eclipsed LSD as the major hallucinogen of mention in the total DAWN system, accounting for 73 percent of the mentions in its drug class.

- Between 1976 and 1978, death reports of abusers in the 20 to 29 age range fell by 5 percent, while reports of abuser deaths in the 50 and over range increased by 4 percent.

Limitations of Data Base. Some limitations of the DAWN data collection methodology include:

- SMSA's are not randomly selected;

- All facilities in participating SMSA's are not able or willing to participate;

- Only people who seek treatment for drug-related problems (or who die as a result of drug-related causes) are included in DAWN; and

- The DAWN reporting base (number of days per month, number of reporting facilities, degree of saturation) changes constantly.

2. Drug Watch

Description. Drug Watch is a DAWN-related system for monitoring recent trends in drug-related medical emergencies and deaths. Drug Watch utilizes these incidents as indicators of the changing extent and nature of drug abuse.

Respondents and Sampling. Drug Watch focuses on reports by a select group of approximately 600 emergency rooms and 100 medical examiners that have participated in DAWN since January 1974 and have reported for at least 90 percent of reportable days. The panel is not selected to be geographically representative, but it does have reasonable geographic coverage. Because Drug Watch uses a select panel, it is clear that changes in the trends observed are not attributable to changes in the reporting base.

Drugs Investigated. Because interest is usually in charting trends in the activity of major drug classifications, Drug Watch monitors a limited number of broad drug categories, such as barbiturates or tranquilizers. If there is an interest in a particular drug, more detailed information on that drug will be prepared through Drug Watch.

Information Collected. The Drug Watch computer program reviews reports for each drug group during a 26-month period. The reports are then distributed by month, and monthly totals are converted to 3-month moving averages. The results are then graphed by a high speed line printer. These graphs comprise the bulk of Drug Watch reports.

Data/Results. As previously mentioned, most Drug Watch data are presented graphically. However, some examples of results presented in Drug Watch, July 1977, include the following:

- Based on reports from emergency rooms from November 1974 to October 1976, tranquilizers were the most frequently mentioned drug, with 73,340 mentions or 24.3 percent of total mentions.
- Inhalants were the least mentioned drug in emergency room reports, with only 1,486 mentions, or 0.49 percent of total mentions.
- Medical examiner reports mentioned heroin/morphine most frequently, with 4,093 mentions or 19.4 percent of the total.
- Cannabis was least mentioned by medical examiners, with only 14 mentions, or 0.07 percent of total mentions.

Limitations of Drug Watch Data Base.

- Only people who seek treatment for drug-related problems or who die as a result of drug-related causes are included;
- The use of a select panel limits the reporting base so that it may not be sufficiently broad to accurately reflect trends in drug use; and

- The panel is not selected to ensure geographical representativeness.

3. Client Oriented Data Acquisition Process (CODAP)

Description. CODAP is a required reporting process for all drug abuse units receiving Federal funds for the provision of treatment and rehabilitation services. CODAP is funded by the National Institute on Drug Abuse and is designed to collect data on clients admitted to and discharged from treatment for drug abuse.

Respondents and Sampling. CODAP admission and discharge forms are completed for each client admitted to and discharged from these clinics, regardless of the source of funding support for any particular client. CODAP Client Flow Summary forms are submitted each month by every clinic that reports through CODAP.

Drugs Investigated/Information Collected. CODAP reports include:

- General notes and an overview of trends in client drug problems;
- Trends in client demographics and treatment data for all clients; and
- Data on clients reporting use of opiates, marijuana, barbiturates, and amphetamines as the primary drug, presented in relation to such client characteristics as geographic region, age at admission, age at first use of primary drug, race/ethnicity, and sex.

Data/Results. Highlights from the Trend Report of January 1975 through September 1978 include:

- Marijuana abusers represented 16.8 percent of all clients in the first quarter of 1975, declined to 7.9 percent in the third quarter of 1976, and then rose gradually to 12.9 percent in 1978.
- There were great differences in the relative proportion of opiate abusers among the various regions. For example, in the third quarter of 1978, opiate abusers represented 60.7 percent of all clients in the Middle Atlantic region, while they represented only 19.4 percent of all clients in the East South Central region. It is important to note, however, that regional differences may be due to differences in the types of clients from region to region.
- At least 50 percent of all admissions were between 21 and 30 years of age.
- CODAP clients were predominantly male. The relative proportion of males decreased slightly, from 74.3 percent of all admissions in the first quarter of 1975 to 71.9 percent in the third quarter of 1978.

Limitations of Data Base. Limitations inherent in CODAP's data collection methodology include:

- Only persons who seek treatment for drug-related problems at a federally funded treatment facility are included.
- Developing patterns shown in data are generally of small magnitude.
- Changes observed during a single quarter may be misleading and may not be sustained by subsequent data.
- Each admission reported does not necessarily represent a different client; to minimize the problem of multiple counts, reports representing the transfers of a client from one clinic to another are not included in the data.

4. Drug Enforcement Statistical Report

Description. The Drug Enforcement Administration of the U. S. Department of Justice publishes the Drug Enforcement Statistical Report. This publication is designed to be a reporting vehicle; no attempt is made to predict future trends. Data are presented by both calendar and fiscal year. Calendar years 1975 through the third quarter of 1979 are included, as are fiscal years 1976 through 1979.

Information Collected. This document is divided into three sections: Enforcement Activity, Drug Abuse Indicators, and Organization and Training Data. The first section, Enforcement Activity, presents data on such subjects as domestic drug removals, port and border drug removals, drug-related arrests and defendant dispositions, and arrests of aliens in the U. S. for drug offenses. The Drug Abuse Indicators section includes data on, for example, national illicit drug retail prices, drug-related deaths and injuries, and federally funded drug treatment admissions. Much of the data in this section is collected through the DAWN and CODAP systems. The last section, Organization and Training Data, presents statistics on the number of DEA personnel and field offices, the number of DEA agents and investigators, and the number of DEA training facilities and activities.

Data/Results. The data highlighted in the Drug Enforcement Statistical Report which covers the period from January 1975 through September 1979 includes the following:

- Total DEA domestic drug removals for calendar years 1975 through the third quarter of 1979 were highest for stimulants. However, for CY 1978, removals of hallucinogens (4,349,917 dosage units) exceeded stimulants removals.

Limitations of the Data Base. The data in this report have a limited use for projecting nationwide drug use, first, because only cases of drug use identified as the result of a drug-related legal or medical problem are included. In addition, the majority of the data presented here are categorized according to the type of drug involved, rather than according to

user characteristics. Finally, those data presented here which are taken from DAWN or CODAP data are subject to the limitations already described for those two systems.

5. Regional Drug Situation Analysis

Description. The Drug Enforcement Administration of the U. S. Department of Justice compiles the Regional Drug Situation Analysis on the following regions: the Northeast, North Central, Southeast, South Central, and Western regions.

Drugs Investigated/Information Collected. Each regional analysis document contains a summary of nationwide data followed by data specific to the SMSA's in that particular region. Each document includes the following data:

- Some significant nationwide and SMSA-specific data (e.g., number of deaths, number of injuries, number of treatment admissions) for the following drugs: heroin, cocaine, hallucinogens, stimulants, and depressants;
- National and regional drug thefts, by number and volume;
- Retail heroin price and purity index, both national and by region;
- Drug-related injuries and deaths, nationally, by region, and by drug;
- Lab seizures by drug and by region; and
- Drug mentions by drug type and SMSA.

Data/Results. Examples of data presented in the Regional Drug Situation Analysis are exhibited in tables 1 and 2 which follow.

Limitations of the Data Base. Many of the data presented in these regional analyses are taken from the DAWN and CODAP systems and thus are subject to the limitations already described. In addition, there is very little breakdown of data by user characteristic in these documents.

6. National Drug Abuse Treatment Utilization Survey (NDATUS)

Description. This data base is composed of statistics similar to those collected by CODAP and suffers from many of the limitations inherent in the CODAP data base.

Unlike CODAP, NDATUS collects data from all known treatment units in the U. S., Puerto Rico, and the Virgin Islands, regardless of their funding source. The data are collected annually for a point prevalence period (i.e., for a given point in time). The most recent published data are for April 1979. Before 1979, data were collected only for drug treatment facilities; however, in 1979, the data base was expanded to include alcoholism treatment units as well as drug treatment units.

Table I
Age at Time of Admission to Federally Funded Drug Treatment Programs, 1978 (Regional Drug Situation Analysis)

	Nationwide	Northeastern Region Phila. SMSA	North Central Region Chicago SMSA	Southeastern Region Miami SMSA	South Central Region Dallas SMSA	Western Region Los Angeles SMSA
Under 18	11.4%	8.4%	5.8%	21.2%	5.5%	5.0%
18 - 25	38.2%	38.3%	34.5%	39.5%	39.5%	36.0%
26 - 44	45.1%	49.0%	55.4%	35.3%	50.1%	52.8%
Over 44	5.2%	4.4%	4.3%	4.0%	5.0%	6.3%

Table 2
Average Number of Drug-Related Deaths per Quarter by Drug and Region, 1978 (Regional Drug Situation Analysis)

		Northeast		North Central		Southeastern		South Central		Western	
	Nationwide	Boston SMSA	New York SMSA	Chicago SMSA	Detroit SMSA	Atlanta SMSA	Wash. D.C. SMSA	Dallas SMSA	Denver SMSA	Los Angeles SMSA	San Francisco SMSA
Heroin	142	2	15	20	14	1.5	2	2.0	.5	41	16
Cocaine	11	--*	--	0.8	0	.25	.25	--	.8	--	.8
Hallucinogens	20	2	.3	2.3	.8	0	0	--	--	7.8	1.8
Stimulants	67	4	6	4.5	1.3	1	3	2.8	2.0	14	8
Depressants	406	12	50	--	--	5.5	--	--	--	--	--

* -- indicates no listing for that drug type, or no deaths for that drug type.

Data/Results. In 1979, 3,590 drug abuse treatment units participated in the survey, which represented 94.7 percent of all known drug treatment facilities. The data related to the number of drug abusers are summarized below.

- There were 202,689 clients in treatment as of April 30, 1979. This represented a utilization rate of 85.4 percent of the budgeted treatment slots.

- Between 1977 and 1978, clients in treatment decreased by 9 percent and the utilization rate dropped 2.0 percentage points. Between 1978 and 1979, the utilization rate dropped 3.6 percentage points.

Limitations of the Data Base. Although these data can provide some general trends, they are limited in their usefulness for estimating the number of drug users nationally.

As with all treatment data, the numbers reflect a unique subpopulation of drug abusers--those who seek treatment. From these data, there is no way to estimate the number of users who have neither elected to nor been forced to participate in a treatment program. Also, the NDATUS data are not presented by type of drug problem, a factor which is critical to making estimates of the number of youthful users and the services they might need. Thirdly, the data are not organized according to any demographic features of the clients. Therefore, projections for specific subpopulations become impossible.

II. SURVEY DATA

Because nonmedical drug use is of concern to individuals in many walks of life, a host of studies have been conducted to investigate the problem. Often these studies are undertaken by State or local agencies or by school systems. While data gathered by these studies can be extremely useful for monitoring the level of drug use in a particular locale, national estimates cannot be based on these figures. Therefore, this report will consider only surveys of national scope.

The National Institute on Drug Abuse has sponsored several nationwide surveys in the past decade. This section will discuss those surveys conducted by NIDA which have focused on special groups of respondents (e.g., young men or high school students). The series known as the National Household Surveys will be the topic of the section that follows.

1. Young Men and Drugs--A Nationwide Survey

Description. A landmark study was Young Men and Drugs--A Nationwide Survey (O'Donnell et al. 1976). Data on the nonmedical use of psychoactive drugs was collected in 1974 and 1975 on men aged 20 to 30 years. This study had three characteristics that no previous study combined:

- The sample was representative of the general population rather than of clinical or other special populations.

- All of the commonly used psychoactive drugs were studied in a standard framework, to allow comparisons between drugs in patterns and correlates of use.

- Detailed information on the correlates and consequences of drug use were collected.

Respondents and Sampling. Data for this study were collected from October 1974 to May 1975 by personal interviews with 2,510 men out of an original sample of 3,024. The study was designed so that data would be representative of all men in the general population who were 20 to 30 years old, inclusive, in 1974. The survey utilized a multistage stratified random sample from Selective Service lists maintained by local Selective Service Boards. By this method, all young men in the U. S. registered with Selective Service had a known chance to be selected.

Drugs Investigated. Nine classes of drugs were investigated in this study: tobacco, alcohol, cannabis, psychedelics, stimulants, sedative-hypnotics, heroin, other opiates, and cocaine.

Information Collected. The core of the interviews conducted for this survey related to past and current drug use. The questionnaire included a series of screening questions to determine which drugs had been used, and how often. These were followed by detailed questions about drugs used ten times or more. The interview also covered a variety of demographic characteristics (e.g., education, religion, criminal behavior, occupation).

In addition, there were two brief self-administered questionnaires to obtain factual data and some indicators of attitudes and values.

Data/Results. The data from this survey show that:

- Larger proportions of men in the younger cohorts than in the older used all drugs with the exception of alcohol and tobacco.

- Median age at onset of use was lower in the younger than in the older cohorts.

- Age is inversely related to drug use.

By the best estimates available,

- More than 1,000,000 men in the 20-30 year age range had used heroin, over 2,500,000 had used cocaine, and more than 10,000,000 had used marijuana.

- Of the men interviewed, 38.2 percent were currently (1974-1975) using marijuana.

- Men were more likely to continue using alcohol and marijuana once they began using them than they were the other drugs.

- Of the men interviewed, 49 percent of those born in 1954 were currently (1974-1975) using marijuana, while only 19 percent of those born in 1945 were currently using marijuana.

Limitations of the Data Base. This data base is limited for a number of reasons. First, it was intentionally limited to young men. Second, it was limited in its use of Selective Service lists; it excluded men who enlisted before age 18 and stayed in the service beyond age 26 (they were not required to register), as well as any men who simply failed to register. In addition, as the authors pointed out, much of the analysis of these data consisted of comparisons of one part of the sample with another, although there was no basis to assume that all parts of the sample were representative of the corresponding parts of the population because the sample had not been stratified.

2. Drugs and American Youth

Description. This study was begun in 1966 to examine the changing lifestyles, values and preferences of American youth on a continuous basis. A panel of 2,200 young men were followed for 3-1/2 years, from the fall of their tenth grade year to the spring of their first year out of high school. A second phase of the study involved surveys of male high school seniors between 1969 and 1974. Drug questions were included beginning in 1970. Then, in 1975, followup surveys were conducted with the entire class for five separate years after graduation.

Respondents and Sampling. 1,798 males were tested in 1970. This represented 71 percent of the original sample, which was drawn to be representative of the national population of boys who were starting tenth grade in public high schools in the continental United States in the fall of 1966.

Drugs Investigated. Drugs included in the survey were: alcohol, marijuana (including hashish), amphetamines, barbiturates, heroin, and hallucinogens.

Information Collected: For each drug class listed above, the following questions were asked:

- How many of your friends would you estimate use the drug?
- How often have you done this during part or all of the last year for other than medical reasons?
- Previous to this past year (that is, before last summer), how often had you done this for other than medical reasons?

Additionally, opinions were gathered on the use of various drugs, and on the availability of various drugs.

Data/Results. Although 29 percent of the original sample were not interviewed in this study, the authors conclude that the "population estimates of such things as drug use were probably changed very little due to panel attrition."

Pertinent results for the 1970 data are as follows:

- Twenty-one percent had used marijuana sometime in the past.
- For other drugs, usage at sometime in the past ranged from 1.8 percent for heroin to 7 percent for hallucinogens.
- Thirty-four percent had used marijuana during the year just after high school graduation.
- For other drugs, 2.2 percent had used heroin in the past year and 11.4 percent had used hallucinogens.

Limitations of the Data Base. Although these data appeared to be comprehensive, their usefulness for making national predictions was limited in several ways. First, there was the problem of attrition and its relation to drug usage. By comparing the remaining sample and the original sample the authors concluded this was not a problem. However, there was evidence to indicate that dropouts were underrepresented in the sample and it was difficult to know how their drug use patterns may have differed from the in-school sample.

The other limitations of the data base have been discussed earlier so only will be mentioned here. The age range was limited. Geographic dispersion was not assured. Finally, the drug data were not available for more than one year.

3. Drug Use Among American High School Students 1975-1977; Drugs and the Class of '78: Behaviors, Attitudes, and Recent National Trends; and Drugs and the Nation's High School Students: Five-Year National Trends

Description. All three of these reports (Johnston et al. 1977; Johnston et al. 1979a; Johnston et al. 1979b) are products of the project, Monitoring the Future: A Continuing Study of the Lifestyles and Values of Youth. This study was conducted by the University of Michigan, Institute for Social Research. These three reports present data, respectively, on the graduating classes of 1975 through 1977; the graduating classes of 1975 through 1978; and the graduating classes of 1975 through 1979. Each of these reports presents data on the following general topics:

- Current prevalence of drug use among high school seniors;
- Trends in drug use since 1975;
- Grade of first use;
- Intensity of use;
- Attitudes and beliefs regarding various types of drug use; and
- Perceptions of certain relevant aspects of the social environment.

The general purpose of the Monitoring the Future study was to develop an accurate picture of the current situation and trends of illicit drug use among young Americans. This would, in turn, provide a rational basis for public debate and formulation of policy. In order to determine the extent of involvement with drugs, this study focused attention on higher frequency levels rather than on proportions of respondents who had "ever used" drugs.

Respondents and Sampling. The same data collection and sampling procedures were used for all five years. Data were collected from high school seniors in the spring of each year, beginning with the graduating class of 1975. Approximately 125 public and private high schools were selected to provide a cross-section of high school seniors.

It should be noted that each sampled school (except for half in 1975) was asked to participate in two data collections. This permitted replacement of half of the total sample of schools each year. The advantages of this were increased administrative efficiency and the ability to determine whether appreciable shifts in scores from one graduating class to the next were attributable to differences in the newly sampled schools.

Within each selected school, up to 400 seniors could be included in the data collection. In schools with fewer than 400 seniors the usual procedure was to include all seniors. In larger schools a subset of seniors was selected either by randomly sampling classrooms or by some other random method. Sample weights were assigned to each respondent to take into account variations in the size of the sample from school to school as well as variations in selection probability occurring at earlier sampling stages. The response rate over the five years averaged 79 percent.

Drugs Investigated. Eleven classes of drugs were distinguished for purposes of this study: marijuana, inhalants, hallucinogens, cocaine, heroin, natural and synthetic opiates other than heroin, stimulants, sedatives, tranquilizers, alcohol, and cigarettes. In making their responses, students were asked to exclude usage of these drugs under medical supervision.

Information Collected. Data were collected by means of five different questionnaire forms, distributed in an ordered sequence which ensured five virtually identical subsamples. One-third of each of the five questionnaire forms consisted of key or core variables common to all forms; all demographic variables and nearly all drug use variables were included in these core variables.

Data/Results. Data resulting from this study include the following:

- In 1977, 61.6 percent of the seniors reported using illicit drugs at some time in their lives, as compared to 64.1 percent in 1978 and 65 percent in 1979. However, a substantial portion of all illicit users (42 percent in 1977 and 43 percent in both 1978 and 1979) have used only marijuana.

- Roughly one-third of the seniors in 1977 through 1979 reported using an illicit drug other than marijuana at some time.

- Marijuana was by far the most widely used illicit drug--47 percent of the class of 1975, 59 percent of the class of 1978, and 60 percent of the class of 1979 reported some use in their lifetime.

- Heroin was the most infrequently used drug; only 1.6 percent of the sample in 1978 and 1.1 percent of the sample in 1979 admitted to ever having used it.

In general,

- Higher proportions of males than females were involved in drug use, especially heavy drug use. However, nearly equal proportions of males and females reported at least some illicit use of drugs other than marijuana in the last year.

- Between 1975 and 1979 there was only a small increase in the proportion who used some illicit drug besides marijuana, with lifetime prevalence rising only 1 percent (from 36 percent to 37 percent) between 1975 and 1979 and annual prevalence rising only 2 percent (from 26 percent to 28 percent).

Limitations of the Data Base. The two major biases inherent in this methodology stem from the use of high school seniors and the administration of the questionnaire in the classroom. As the authors note, this methodology excluded both high school dropouts (15-20 percent of each age cohort) and absentees. It is likely that both dropouts and students who were regularly absent were more likely to be involved in drug use than the remainder of the high school seniors. However, the authors note that this bias would quite probably remain the same from year to year, thus not affecting their trend data. In addition, it is important to note that the sampling methodology utilized in this study increased the likelihood of schools with larger senior classes being selected for data collection. However, weights were assigned to respondents to minimize any bias resulting from this sampling method.

III. THE NATIONAL SURVEY

The data base which appears to provide the most consistent source of drug use data on youth and young adults is the National Survey conducted between 1971 and 1977. There are five studies in this series.[2] The first two surveys were conducted for the National Commission on Marihuana and Drug Abuse. The most recent three were conducted for the National Institute on Drug Abuse. The five studies are entitled:

1) 1971 study: Public Attitudes Toward Marihuana.[3] (Published in 1972.)

2) 1972 study: Drug Experience, Attitudes and Related Behavior Among Adolescents and Adults. (Published in 1973.)

3) 1974 study: Public Experience with Psychoactive Substances. (Published in 1975.)

4) 1976 study: Nonmedical Use of Psychoactive Substances. (Published in 1976.)

5) 1977 study: National Survey on Drug Abuse. (Published in 1977.)

These surveys share several critical characteristics which contribute to their utility for estimating drug use:

- o Data collection on the "at risk" 18-25 year age bracket;
- o Adequate and consistent sampling methodology;
- o Comparability of drugs investigated;
- o Comparability of question formats; and
- o Accessibility of detailed tabular data.

Each of the five studies is discussed below to demonstrate its adequacy as a data base for projecting the number of drug users in the United States in future years.

1. Public Attitudes Toward Marijuana

Description. The data from this 1971 survey were sought to provide a base from which policy-relevant information could be gathered. The study was planned to cover three aspects of the marijuana issue as well as selected other substances: (1) attitudes, feelings, and beliefs relative to marijuana and other substances, (2) knowledge of marijuana and other substances, and (3) the relationship between attitudes, beliefs, and behavior and certain explanatory variables.

Respondents and Sampling. A nationwide probability sample of youth (age 12-17) and adults (18 and older) was selected for this study and yielded 2,405 adults and 781 youth. The adult data were further subdivided into the following age categories for analysis: 18-25, 26-34, 35-49, and 50 and over. Young adults were considered to be particularly important for a drug use study; therefore, young adults aged 18-34 were oversampled and adults over age 35 were undersampled. The data were later weighted to compensate for this oversampling.

Drugs Investigated. Data were collected on the following drugs: alcohol, tobacco, marijuana, specific pills, cocaine, LSD, and heroin. However, the emphasis of the study was on marijuana, not on other drugs.

Information Collected. Three different types of instruments were used in this study:

- o A face-to-face structured interview for adults;
- o A self-administered questionnaire for adults to complete following the interview; and

- o A self-administered questionnaire as the only instrument for the youth sample.

The majority of questions in this study concerned attitudes and beliefs about marijuana and selected other drugs. However, several self-administered questions were asked about usage of various drugs. The self-administered questionnaire also gathered detailed information on the circumstances surrounding the respondents' initial contact with and/or use of marijuana. Table 3 depicts certain questions which could provide data on the prevalence and incidence of drug usage.

Data/Results

- o Among adults, age 18 and older, 15 percent reported using marijuana at some time. The comparable figure for youth, age 12-17, was 14 percent. Five percent of adults and 6 percent of the 12-17 age group classified themselves as present users.

- o Highest experience levels: 39 percent of young adults, 18-25; 44 percent of college students. There was a rapid falloff in reported usage after age 25.

2. Drug Experience, Attitudes and Related Behavior Among Adolescents and Adults

Description. The 1972 survey drew heavily upon the earlier report (Public Attitudes Toward Marihuana) in forming questions and in providing background information about the drug abuse problem. As with the previous survey the majority of questions were asked during a personal interview, but some questions were self-administered.

Respondents and Sampling. The sampling strategy was the same as for the 1971 survey, with the exception that the sample was designed to oversample the 18-29 age group. The number of adults interviewed was 2,411, and the number of youth was 880.

Drugs Investigated. The following drugs were included in the survey: tobacco; alcohol; ethical[4] and proprietary[5] tranquilizers, stimulants, and sedatives; heroin; cocaine; LSD; marijuana; glue; and methadone (knowledge only).

Information Collected. The questions asked in this survey covered admitted drug behavior as well as attitudes and knowledge related to drugs. The usage of pills was covered in the face-to-face interview, while the usage of other drugs was covered in the self-administered questionnaire. Table 4, below, presents those questions which are critical to estimating the amount of youthful drug use and the specific drugs for which they were asked. Data on pills were included only when used for nonmedical reasons.

Data/Results

- o Overall reported experience with marijuana was about the same as in 1971, 16 percent of adults and 14 percent of young people had had experience with it.

Table 3
1971 Survey: Critical Questions Asked About Specific Drugs

Questions	Tobacco	Alcohol	Proprietary sedatives, tranquilizers and stimulants	Opiates	Marijuana	Tranquilizers	Barbiturates or sedatives	Stimulants, amphetamines, methamphetamines	Cocaine	LSD, mescaline, peyote	Heroin	Hashish
Have you ever used (drug)?	X		X	X	X	X	X	X	X	X	X	X
During the past 30 days, on how many days did you use (drug)?		X										
How old were you when you first tried (drug)?					X							
On the average, about how often do you use (drug) at the present time?					X							
About how many of your friends use (drug) at least once in a while?					X							

Table 4
1972 Survey: Critical Questions Asked About Specific Drugs

Questions	Alcohol	Cigarettes	Proprietary sedatives, stimulants, tranquilizers*	Barbiturates*	Tranquilizers*	Amphetamines*	Marijuana	Heroin	LSD	Cocaine	Glue
When was the first time that you tried (drug)? About how old were you?	X						X	X	X	X	
How often do you use (drug) at the present time?			X				X				
When was the most recent time you used (drug)?								X	X	X	X
About how long ago did you have (drug) for the first time?		X	X								
Ever tried (drug)?	X	X	X	X	X	X	X	X	X	X	X
During past 7 days did you use (drug)?	X										

*Data on pills are included only for nonmedical use.

- Four percent of adults and 4 percent of youth used marijuana at least once a week.

- Of all respondent characteristics, age was most markedly related to marijuana experience. Consumption peaked during ages 18-21. (55 percent of that group had had marijuana experience) and dropped off rapidly after that.

- Trials of other substances were reported as follows:

	Adults	Youths
LSD/other Hallucinogen	4.6%	4.8%
Glue/inhalants	2.1%	6.4%
Cocaine	3.2%	1.5%
Heroin	1.3%	.6%

3. Public Experience with Psychoactive Substances

Description. The 1974 survey included some of the same questions asked in the earlier surveys, and at the same time expanded its coverage of patterns of drug use. As with the previous surveys, a combination of interviewer-administered and self-administered questionnaires was employed.

Respondents and Sampling. As with the previous surveys, the youth and adult respondents were selected on the basis of a nationwide probability sample. In this survey, a slightly larger age range (18-34) was oversampled compared to the oversampling of the 18-29 age range in the 1972 survey. The number of respondents interviewed in the adult category was 3,071 and the number of youths was 952.

Drugs Investigated. The following drugs were included in this survey: tobacco; alcohol; ethical and proprietary sedatives, tranquilizers and stimulants; marijuana; hashish; heroin; cocaine; methadone; LSD; and opium.

Information Collected. The data collection covered both attitude and drug behavior items. Sensitive behavioral questions were self-administered to increase the perceived anonymity of the response. Less threatening questions, including attitudes and some behaviors, were included in the questionnaire administered by the interviewer. The self-administered questions covered the patterns of drug use engaged in by the sample respondents. Certain of these questions are critical for estimating the amount of drug use occurring during that period. Table 5 presents a list of critical questions and the drugs about which they were asked. This table includes those drugs covered in the self-administered section as well as the interviewer-administered section.

Data/Results

- The public had had more experience with marijuana than with any of the other psychoactive drugs studied. Nearly one adult in five (19 percent) and more than one young person in five (23 percent) reported ever having used marijuana. This represented a slight

Table 5
1974 Survey: Critical Questions Asked About Specific Drugs

Questions	Marijuana	Hashish	Glue	Cocaine	LSD	Heroin	Methadone	Opiates	Alcohol	Tobacco	Proprietary Sedatives and Stimulants	Ethical Sedatives or Barbiturates	Tranquilizers	Speed or Amphetamines
About how long ago was the first time you tried (drug)?	X	X	X	X	X	X	X	X			X	X	X	X
When was most recent time you used (drug)?	X	X	X	X	X	X	X	X	X		X	X	X	X
During the last month, how many days did you use (drug)?	X	X	X	X	X	X	X	X	X		X	X	X	X
Previous month, how many days did you use (drug)?	X	X	X	X	X	X	X	X			X	X	X	X
Likely to use (drug) again?	X	X	X	X	X	X	X	X			X	X	X	X
Ever use (drug)?	X	X	X	X	X	X	X	X	X	X	X	X	X	X

increase for the adult population, and a marked increase among the 12-17 age group.

- Under half of the adults who had tried marijuana were current users (7 percent), while 12 percent of youth were current users.

- Among the drugs studied, experience with psychotherapeutic drugs was next in incidence to marijuana, with 13 percent of the adult public and 10 percent of the young people reporting some nonmedical experience with an over-the-counter or prescription sedative, tranquilizer, or stimulant.

- The use of marijuana, whether measured in terms of those who had ever tried it or those who were current users, showed strong age relationships. In each instance, people aged 18-25 formed the highest use cohort.

4. Nonmedical Use of Psychoactive Substances

Description. The 1976 survey consisted of two parts, a personal interview and a self-administered questionnaire. The study is sometimes referred to as the 1975-76 study.

Respondents and Sampling. The sampling procedure remained the same; however, those individuals in the 18-34 age group were oversampled because they were considered to be the most likely to provide drug use data. The number of adults interviewed was 2,590 and the number of youths was 986. An increased emphasis was placed on the 18-25 age grouping and all important data were presented for this group individually. Therefore, data are available on the following groups of individuals:

- Males/females 18-25;

- Whites/nonwhites 18-25;

- Not high school graduate/high school graduate/some college/not college graduate/college graduate/college student 18-25; and

- Large metropolitan area/other metropolitan area/nonmetropolitan area 18-25.

Drugs Investigated. The following drugs were included in the survey: tobacco; caffeine; alcohol; proprietary sedatives, stimulants, and tranquilizers; barbiturates; sedatives; marijuana; hashish; glue/inhalants; cocaine; LSD/hallucinogens; PCP/Angel Dust; heroin; methadone; and opium.

Information Collected. The questions asked in this survey can be grouped into two categories: factual or attitudinal questions, and behavior questions.

Table 6 presents questions asked about use of specific drugs.

Table 6
1976 Survey: Critical Questions Asked About Drugs Used for Nonmedical Purposes

Questions	Tobacco	Caffeine	Alcohol	Proprietary sedatives, stimulants or tranquilizers	Barbiturates or sedatives	Tranquilizers	Stimulants	Marijuana	Hashish	Glue/inhalants	Cocaine	LSD/hallucinogens	PCP/Angel Dust	Heroin	Methadone	Opium
Have you ever used (drug)?	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
About how long ago was the first time you took (drug)?				X	X	X	X	X	X	X		X	X	X	X	X
About how long ago was the most recent time you took (drug)?				X	X	X	X	X	X	X		X	X	X	X	X
During past month, on about how many different days did you use (drug)?				X	X	X	X	X	X	X		X	X	X	X	X
Previous month?				X	X	X	X	X	X	X		X	X	X	X	X
Are you likely to use (drug) for nonmedical reasons again?				X	X	X	X	X	X	X		X	X	X	X	X
When it comes to using (this drug) do you think of yourself as a regular user or only an occasional user?				X	X	X	X	X	X	X		X	X	X	X	X
Just roughly, how many times in your life have you used (drug)?								X								

Data/Results

- Among youth (12-17) more than one in five (22.4 percent) reported having used marijuana, and more than half of these (12.3 percent) reported current use, meaning in the past month. For adults (age 18 and over) the prevalence rate (21.3 percent ever used) was similar to that of youth, but adult current use rate was substantially lower at 8.0 percent.

- Among the adult public, young adults between ages 18 and 25 had more experience with marijuana than older adults, age 26 and over. In fact, more than half the young adults had used marijuana while about one in eight older adults had used it. Those age 18 through 25 also had higher current use rates. Fully one in four in this age group were current users compared to one in twenty-five older adults.

5. National Survey on Drug Abuse: 1977

Description. The majority of the questions in the 1977 survey have remained the same from the previous year, to facilitate comparisons.

Respondents and Sampling. In this survey 1,272 youths and 3,322 adults were selected for the sample. The sampling procedure remained the same and included an oversampling of 18-25 year-olds.

Drugs Investigated. Alcohol; tobacco; proprietary sedatives, stimulants, and tranquilizers; methadone; heroin; opium; marijuana; cocaine; LSD or other hallucinogens; and glue or other inhalants were all investigated.

Information Collected. This survey included three types of questions: factual and attitudinal; nominative; and behavioral. The factual and attitudinal questions primarily covered familiarity with various drugs and opinions about marijuana.

The nominative technique was developed to provide additional information about heroin use. Since the reported levels of heroin use in a population are so small (.5 percent-1.4 percent), it was considered necessary to gather as much information relative to heroin use from the sampled groups as possible. Therefore, in addition to asking the respondent directly about his or her own heroin use, he or she was asked to report on the heroin use (if any) of close friends.

As a partial cross-check on the heroin use data, the respondents were also asked to indicate how many of their friends knew for sure that they had used heroin.

The third type of data collected was behavioral. Table 7 lists those questions which provide estimates of the amount of drug use which was occurring in the population.

Table 7
1977 Survey: Critical Questions Asked About Specific Drugs

Question	Tobacco	Caffeine	Alcohol	Proprietary sedatives, stimulants & tranquilizers	Marijuana	Hashish	Glue or other inhalants	Cocaine	LSD and other hallucinogens	PCP or Angel Dust	Opium	Heroin	Methadone
Have you ever used (drug)?	x	x	x	x	x	x	x	x	x	x	x	x	x
How much (drug) daily?	x	x	x										
About how long ago was the first time you took (drug)?				x	x	x	x	x	x		x	x	
About how long ago was the most recent time you took (drug)?				x	x	x	x	x	x		x	x	
During the past month, on about how many different days did you use (drug)?				x	x	x	x	x	x		x	x	
When it comes to using (this drug) do you think of yourself as a regular user or only an occasional user, or a non-user?				x	x	x	x	x	x		x	x	
Just roughly, about how many times in your life have you used (drug)?					x	x	x	x	x		x	x	
Which (drug) tried first, second, etc.?					x	x	x	x	x			x	

Data/Results

- More than one-fourth (28.2 percent) of youth (age 12-17) reported marijuana experience and about one-sixth (16.1 percent) reported current use (in past month). For adults (age 18 and over) the lifetime prevalence rate (24.5 percent) was somewhat lower than that of youth, and current use (8.2 percent) was half of that reported by 12-17 year-olds.

- It is important to note that marijuana experience was strongly related to age and that the highest prevalence was found in 18-25 year-olds. Of this age group, six in ten had used marijuana, compared to fewer than two in ten adults 26 and over.

- Young adults also reported greater lifetime prevalence in the use of hallucinogens, with 19.8 percent reporting use at some time as compared to 2.6 percent of older adults.

- Use of a drug "stronger" than marijuana (and/or hashish) was reported by about one in four young adults, one in ten youth, and one in twenty-five older adults.

6. An Index of the Number of Drug Abusers in States and Major Urban Areas

Description. This study was conducted in 1975 based on the 1972 data collected for Drug Experience, Attitudes and Related Behavior Among Adolescents and Adults. The purpose of this study was to provide data on drug abuse for geographic units smaller than the whole U.S. The national surveys discussed earlier provide reasonably good estimates of the number of abusers in the total U.S. population; however, the structure of the sampling plan does not allow for State-by-State estimates with the same level of precision. The procedure of the current study involved considering factors which were related to drug use (e.g., age, region of the country, education) and estimating the number of drug users in each State based on the number of individuals having had each of the critical characteristics.

Respondents and Sampling. The entire sample of adults (2,411) in the 1972 survey were used in this study. In addition, a subsample of 418 youth (12-17 years) were selected. This subsample represented all youth who were interviewed in a household where an adult also had been interviewed.

Drugs Investigated. Marijuana, cocaine, heroin, hallucinogens, and volatile substances were investigated. These drugs were investigated individually as well as grouped as follows: one or more illegal substances; nonmedical use of ethical sedatives, tranquilizers, or stimulants; nonmedical use of one or more psychotropic drugs (sedatives, tranquilizers, stimulants); one or more illegal substances and/or medical use of psychotropic drugs.

Two risk factors were also included in this study: ever used and current use (within the past year).

Data/Results. A regression analysis was conducted to predict usage of specific drugs according to certain demographic and locational

characteristics. Marijuana was the drug for which the constellation of characteristics predicted best. Roughly 27 percent of the variance in marijuana usage (ever used) was accounted for by the following variables: (age/education, sex, race/ethnic group, family income, community type, region, and percent of population in college dormitories). The strongest predictor appeared to be whether the individual was between 18-24 years old and a student. Usage of drugs other than marijuana was predicted much less successfully.

Once the regression coefficients had been calculated, it was a simple matter to apply them to specific State data, add up all of the weighted predictors, and adjust for State population to provide an estimate of State drug use.

Summary

The foregoing studies were reviewed to judge their adequacy as data bases for estimating the number of youthful drug users in the population. Several factors were considered in assessing each study's potential usefulness for making projections, including: the respondents selected for study, the sampling methodology used, the drugs investigated, and the information collected. Based on these factors the following conclusions were derived.

Treatment-oriented data bases have one major advantage: the data are collected routinely every year. However, these data bases are not adequate for estimating youthful drug abuse for several reasons.

- The respondents are self-selected and represent a unique subpopulation of drug users.
- Geographical representation is not assured.
- Generally, published data are not reported with the level of detail necessary for our estimates (e.g., age, race, or sex of user).

Therefore, although some of these data could possibly be used to corroborate drug use trends, they cannot be the basis from which the estimates will be derived.

Also considered as data sources for the drug use estimates were those high-quality surveys which investigated young adults and were national in scope. Those studies described in this review all contained sound sampling methodologies which made them warrant further attention. However, there were several reasons why, as a group, these studies were not suitable for prediction purposes:

- Generally, the studies were one-shot endeavors. Therefore, it was impossible to use the data for developing trends.
- The one study that was continued over a period of time did not investigate the full age range of interest.
- The drugs investigated and the information collected were not consistent from study to study.

The five national surveys conducted by the National Commission on Marihuana and the National Institute on Drug Abuse shared certain characteristics which make them most suitable for predicting future drug use.

These surveys have maintained essentially the same format over the nine-year period that they cover. They have used similar sampling methodologies, drug classes, and wording of questions. The sampling methodology used has consistently been a sound one which has yielded reliable and valid results. Also, the sampling frame has adequately covered the major geographical areas of the United States. Another factor which makes these studies particularly useful is that generally, in the analyses, they highlight the age range of interest, 18-25 years.

There are some inconsistencies from year to year which make it impossible to compare all drug classes or all types of information for every year in which a study was conducted. Even with these problems, however, the 1976 and 1977 surveys, in particular, provide a wealth of data with which to estimate the number of 18-25 year-old drug users in the future.

The following chapter presents projections of drug abuse for young adults in 1985, 1990, and 1995.

FOOTNOTES

[1] References in this chapter appear in the list of Drug Abuse Data Sources which begins on page 79.

[2] A sixth survey in this series was conducted in 1979. However, the data are not included in this review.

[3] Please note: while "marijuana" is the accepted form of the word, the spelling may change in the course of this report in order to preserve the form used in the reference cited.

[4] Ethical drugs require a prescription.

[5] Proprietary drugs can be purchased without a prescription.

Chapter 4

Projections of Drug Abuse

INTRODUCTION

The data base which provides the most consistent source of drug abuse information on young adults is the National Survey conducted between 1971 and 1977. This major data base consists of five individual surveys. The first two surveys (1971 and 1972) were conducted by the National Commission on Marihuana and Drug Abuse. The most recent surveys (1974, 1976, 1977) were conducted by the National Institute on Drug Abuse.[1] The 1976 and 1977 surveys report various measures of drug abuse for young adults 18-25 years old. Since this age group is the focus of this study, the projections presented herein are based on an analysis of 1976 and 1977 survey data.

Several drugs were investigated by both the 1976 and 1977 surveys: marijuana, inhalants, hallucinogens, cocaine, heroin, and other opiates. Data on 18-25 year-olds were reported for all these drug categories. In addition, the 1974 survey reported estimates of marijuana use for 18-25 year-olds. However, the projections of drug abuse presented herein are based only on the 1976-1977 survey data.

Three different measures of drug abuse were used consistently in the 1976 and 1977 surveys for all the drugs mentioned above:

- Lifetime prevalence;
- Current use, i.e., use in past month; and
- Type of user as reported by respondent, i.e., regular or occasional user.

The 1976 and 1977 survey data for each drug category and 1974 data for marijuana are presented in the following sections along with projections of drug abuse for 1985, 1990, and 1995.

MARIJUANA[2]

Lifetime Prevalence

In 1977, 60.3 percent of young adults 22-25 years of age admitted to having used marijuana at some period in their lives; 56.8 percent of the 18-21 year-olds admitted to having used marijuana. Table 1 presents the corresponding figures for 1976 and 1974 and the percentage change over time for the three years reported.

Table 1
Percent of Young Adults Who Had Used Marijuana:
1974, 1976, and 1977 Surveys, with Changes

Year	18-21 Year-Olds	22-25 Year-Olds
1974	52.8%	47.2%
1976	50.4%	51.6%
1977	56.8%	60.3%
1974-1977 Change	+4.0%	+13.1%
1974-1976 Change	-2.4%	+4.4%
1976-1977 Change	+6.4%	+8.7%

Table 2 presents population projections for young adults in 1985, 1990, and 1995. We used a straight-line approach, based on 1977 reported rates, to project lifetime prevalence of marijuana for these age groups. The straight-line approach involves multiplying the most recent reported prevalence rate (i.e., 60.3 percent as reported in 1977) by the projected population for various subgroups in 1985, 1990, and 1995. The product of this arithmetic exercise is a set of projections estimating how many young adults in various subgroups will admit to using marijuana in 1985, 1990, and 1995; in other words, we calculated the estimates presented in table 3 as follows:

.568 (reported prevalence of marijuana use for 18-21 year-olds in 1977) x
15,442,000 (projected population of 18-21 year-olds in 1985) =
8,772,000 (projected number of 18-21 year-olds in 1985 who will admit to using marijuana).

Using this same approach for 1985, we can estimate that 9,886,000 individuals 22-25 years old will admit to some use of marijuana. Estimates for 1977 and projections of reported lifetime prevalence for 1985, 1990, and 1995 are presented in table 3.

In 1976 and 1977 the National Institute on Drug Abuse also measured lifetime prevalence of marijuana use among several subgroups of young adults inclu[illegible]emales, males, whites, nonwhites, and young adults living in large [illegible]itan, other metropolitan, and nonmetropolitan areas. Table 4 pr[illegible]s the percentage of young adults within each subgroup admitting t[illegible]ng used marijuana at some point in their lives.

Table 2
Projections of Young Adult Populations for 1985, 1990, and 1995

Year	18-21 Year-Olds	22-25 Year-Olds
1985	15,442*	16,566
1990	14,506	14,491
1995	12,995	13,820

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Table 3
Number of Young Adults Who Had Used Marijuana, 1977 Survey, and Projections for 1985, 1990, and 1995

Year	18-21 Year-Olds	22-25 Year-Olds
1977	9,632*	9,261
1985	8,772	9,989
1990	8,239	8,738
1995	7,381	8,333

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Table 4
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Marijuana: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	43.6%	54.4%
Males	59.8%	64.5%
Whites	53.6%	60.1%
Nonwhites	46.3%	54.4%
Large Metropolitan Residents	58.1%	62.7%
Other Metropolitan Residents	57.5%	63.2%
Nonmetropolitan Residents	36.2%	47.8%

Multiplying the 1977 prevalence rates by the population projections of these subgroups of young adults (see appendix A), we can project the number of young adults (18-25) in various subgroups who did admit to having used marijuana in 1977 and who will admit to its use in 1985, 1990 and 1995.

Table 5
Number of Young Adults 18 to 25 in Various Subgroups Who Had Used Marijuana, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	8,845*	8,652	7,833	7,229
Males	10,633	10,386	9,416	8,724
Whites	16,971	16,090	14,328	13,036
Nonwhites	2,633	2,849	2,805	2,786
Large Metropolitan Residents	7,947	7,767	7,036	6,506
Other Metropolitan Residents	6,231	6,089	5,516	5,101
Nonmetropolitan Residents	4,881	4,773	4,324	3,999

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Use in Past Month

In 1977, 30.4 percent of the 18-21 year-olds and 24.2 percent of the 22-25 year-olds reported use of marijuana within the past month. Reported current use of marijuana for 1974-1977 is presented in table 6.

Table 6
Percent of Young Adults Using Marijuana Currently: 1974, 1976 and 1977 Surveys, with Change

Year	18-21 Year-Olds	22-25 Year-Olds
1974	30.3%	20.4%
1976	25.6%	25.7%
1977	30.4%	24.2%
1976-1977 Change	+4.8%	-1.5%

Using a level straight-line approach to projecting current use in the future, we can estimate that in 1985 approximately 4,694,000 18-21 year-olds and 4,009,000 22-25 year-olds will be current marijuana users. Projections of current use in 1985, 1990, and 1995 are presented in table 7.

Table 7
Projections of Young Adults Using Marijuana Currently, for 1985, 1990, and 1995

Year	18-21 Year-Olds	22-25 Year-Olds
1985	4,694*	4,009
1990	4,410	3,507
1995	3,950	3,344

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

In 1976 and 1977 the National Institute on Drug Abuse also measured current use of marijuana for various subgroups of young adults (see table 8).

Table 8
Percent of Young Adults 18 to 25 in Various Subgroups Using Marijuana Currently: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	19.6%	20.8%
Males	31.4%	35.1%
Whites	26.3%	28.4%
Nonwhites	23.8%	24.1%
Large Metropolitan Residents	29.5%	32.0%
Other Metropolitan Residents	29.6%	29.5%
Nonmetropolitan Residents	15.6%	18.1%

Table 9 presents estimates of the number of young adults in various subgroups who admitted to being current users of marijuana in 1977 and who will admit to current use in 1985, 1990, and 1995.

Table 9
Number of Young Adults 18 to 25 Using Marijuana Currently, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	3,382*	3,308	2,995	2,766
Males	5,786	5,652	5,124	4,747
Whites	7,925	7,603	6,771	6,160
Nonwhites	1,166	1,262	1,243	1,234
Large Metropolitan Residents	4,056	3,964	3,591	3,321
Other Metropolitan Residents	2,908	2,842	2,575	2,381
Nonmetropolitan Residents	1,848	1,807	1,638	1,514

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Type of User

In previous NIDA surveys, respondents described themselves as regular users, occasional users, or nonusers with respect to marijuana. Table 10 identifies the percentage of 18-21 and 22-25 year-olds describing themselves as regular or occasional users in 1974-1977.

Table 10
Percent of Young Adults Using Marijuana Regularly or Occasionally: 1974, 1976, and 1977 Surveys, with Change

	18-21 Year-Old		22-25 Year-Old	
Year	Regular User	Occasional User	Regular User	Occasional User
1974	10.8%	27.0%	6.7%	21.6%
1976	6.9%	22.3%	6.5%	27.4%
1977	13.0%	23.7%	10.7%	22.6%
1976-1977 Change	+6.1%	+1.4%	+4.2%	-4.8%

Using a level straight-line approach to projecting type of use in the future, we can estimate that in 1985 approximately 2,008,000 individuals 18-21 years old and 1,754,000 individuals 22-25 years old will describe themselves as regular marijuana users. Estimates for 1977 and projections for 1985, 1990, and 1995 are presented in table 11.

Table 11
Number of Young Adults Using Marijuana Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Year	18-21 Year-Olds		22-25 Year-Olds	
	Regular User	Occasional User	Regular User	Occasional User
1977	2,204*	4,578	1,029	3,317
1985	2,007	3,660	1,773	3,744
1990	1,886	3,438	1,551	3,275
1995	1,689	3,080	1,479	3,123

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

In 1976 and 1977 the National Institute on Drug Abuse also estimated the percentage of young adults in various subgroups who were regular or occasional users of marijuana (see table 12).

Table 12
Percent of Young Adults 18 to 25 in Various Subgroups Using Marijuana Regularly or Occasionally: 1976 and 1977 Surveys

Subgroup	1976		1977	
	Regular	Occasional	Regular	Occasional
Females	4.4%	20.2%	7.0%	21.3%
Males	8.9%	29.2%	17.1%	25.8%
Whites	6.5%	26.2%	12.2%	23.7%
Nonwhites	6.5%	20.2%	10.5%	22.0%
Large Metropolitan Residents	10.7%	24.8%	13.7%	25.0%
Other Metropolitan Residents	6.2%	30.4%	12.4%	27.1%
Nonmetropolitan Residents	3.5%	15.8%	8.2%	15.1%

Using the 1977 data as the basis for projecting use, we can estimate the number of young adults who will admit to being regular or occasional users of marijuana in 1977 and the number who will admit to this behavior in 1985, 1990, and 1995 (table 13).

Table 13
Number of Young Adults 18 to 25 in Various Subgroups Using Marijuana Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroup	1977		1985		1990		1995	
	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional
Females	1,138*	3,463	1,113	3,388	1,008	3,067	930	2,830
Males	2,819	4,253	2,754	4,155	2,496	3,767	2,313	3,489
Whites	3,404	6,613	3,266	6,345	2,909	5,650	2,646	5,141
Nonwhites	508	1,065	550	1,152	541	1,135	538	1,127
Large Metropolitan Residents	1,736	3,169	1,697	3,097	1,537	2,806	1,422	2,594
Other Metropolitan Residents	1,223	2,672	1,195	2,611	1,082	2,365	1,001	2,187
Nonmetropolitan Residents	837	1,542	819	1,508	742	1,366	686	1,263

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

INHALANTS[3]

Lifetime Prevalence

In 1977, 10.8 percent of young adults surveyed by the National Institute on Drug Abuse admitted to having used inhalants at some time in the past. Applying this figure to population projections for young adults, we can estimate that 3,457,000 million young adults will admit to having used inhalants in 1985. The corresponding estimates for 1990 and 1995, respectively, are 3,132,000 and 2,896,000.

Using prevalence rates reported in 1977 with a level straight-line projection technique, we can estimate the number of young adults who will have used inhalants in the future. Table 14 presents the 1976 and 1977 reported prevalence rates and table 15 presents estimates of the number of young adults in various subgroups who admitted to having used inhalants in 1977 and who will admit to their use in 1985, 1990, and 1995.

Table 14
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Inhalants: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	5.6%	8.0%
Males	9.9%	14.4%
Whites	8.3%	11.2%
Nonwhites	5.1%	10.7%
Large Metropolitan Residents	10.8%	10.7%
Other Metropolitan Residents	8.3%	13.7%
Nonmetropolitan Residents	3.7%	7.1%

Table 15
Number of Young Adults 18 to 25 in Various Subgroups Who Had Used Inhalants, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	1,301*	1,272	1,152	1,063
Males	2,374	2,319	2,102	1,948
Whites	3,125	2,998	2,670	2,429
Nonwhites	518	560	552	548
Large Metropolitan Residents	1,356	1,325	1,201	1,110
Other Metropolitan Residents	1,351	1,320	1,196	1,106
Nonmetropolitan Residents	725	709	642	594

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Use in Past Month

A very small percentage of young adults admitted to current use of inhalants in 1976, and in 1977 this percentage dropped below one percent. Using the 1977 reported figures (table 16), we can project the number of young adults, in various subgroups, who did admit to being current users of inhalants in 1977 and who will admit to current use in 1985, 1990, and 1995 (table 17). In 1985 the number of current young adult users of inhalants is projected to be approximately 161,000.

Table 16
Percent of Young Adults 18 to 25 Using Inhalants Currently:
1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	.3%	-
Males	1.0%	.5%
Whites	.5%	.3%
Nonwhites	.4%	-
Large Metropolitan Residents	.6%	.4%
Other Metropolitan Residents	1.1%	.3%
Nonmetropolitan Residents	-	-

Table 17
Number of Young Adults 18 to 25 in Various Subgroups Using
Inhalants Currently, 1977 Survey, and Projections for 1985,
1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	-	-	-	-
Males	82*	81	73	68
Whites	84	80	72	65
Nonwhites	-	-	-	-
Large Metropolitan Residents	51	50	.5	42
Other Metropolitan Residents	30	29	26	24
Nonmetropolitan Residents	-	-	-	-

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Type of User

In the 1977 NIDA survey, 1.6 percent of young adults surveyed described themselves as occasional users of inhalants; no young adults surveyed reported regular use of inhalants. Using the 1977 data (table 18), we can project the number of young adult occasional users in various subgroupings (table 19). In 1985, the number of young adult users who will describe themselves as occasional users is projected to be approximately 512,000.

Table 18
Percent of Young Adults 18 to 25 in Various Subgroups Using Inhalants Regularly or Occasionally: 1976 and 1977 Surveys

Subgroup	1976 Regular User	1976 Occasional User	1977 Regular User	1977 Occasional User
Females	-	.3%	-	.8%
Males	.3%	1.4%	-	2.4%
Whites	-	.8%	-	1.9%
Nonwhites	-	1.5%	-	-
Large Metropolitan Residents	.6%	1.4%	-	.7%
Other Metropolitan Residents	-	.7%	-	2.8%
Nonmetropolitan Residents	-	.7%	-	.9%

Table 19
Number of Young Adults 18 to 25 in Various Subgroups Using Inhalants Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroup	1977 Regular	1977 Occasional	1985 Regular	1985 Occasional	1990 Regular	1990 Occasional	1995 Regular	1995 Occasional
Females	-	130*	-	127	-	115	-	106
Males	-	396	-	386	-	350	-	325
Whites	-	531	-	509	-	453	-	412
Nonwhites	-	-	-	-	-	-	-	-
Large Metropolitan Residents	-	89	-	87	-	79	-	73
Other Metropolitan Residents	-	276	-	270	-	244	-	226
Nonmetropolitan Residents	-	92	-	90	-	81	-	75

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

HALLUCINOGENS[4]

Lifetime Prevalence

In 1977, 19.4 percent of young adults surveyed by the National Institute on Drug Abuse admitted to having used hallucinogens at some time in the past. Applying this figure to population projections for young adults, we can project that 6,209,000 young adults will admit to having used hallucinogens in 1985. The corresponding projections for 1990 and 1995, respectively, are 5,626,000 and 5,202,000.

Using prevalence rates reported in 1977 with a level straight-line projection technique, we can project the number of young adults in various subgroups, who will have used hallucinogens in the future. Table 20 presents the 1976 and 1977 reported prevalence rates and table 21 presents projections of the number of young adults in various subgroups who did admit to having used hallucinogens in 1977 and who will admit to their use in 1985, 1990 and 1995.

Table 20
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Hallucinogens: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	14.8%	14.4%
Males	19.2%	25.6%
Whites	7.9%	21.3%
Nonwhites	7.9%	11.6%
Large Metropolitan Residents	18.7%	19.8%
Other Metropolitan Residents	20.8%	23.8%
Nonmetropolitan Residents	9.9%	13.2%

Table 21
Number of Young Adults 18 to 25 in Various Subgroups Who Had Used Hallucinogens, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	2,341*	2,290	2,073	1,914
Males	4,220	4,122	3,737	3,462
Whites	5,944	5,702	5,078	4,620
Nonwhites	561	607	598	574
Large Metropolitan Residents	2,509	2,453	2,222	2,055
Other Metropolitan Residents	2,346	2,293	2,077	1,921
Nonmetropolitan Residents	1,348	1,318	1,194	1,104

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Use in Past Month

Less than two percent of the female young adults and three percent of the male young adults admitted to current use of hallucinogens in 1976 and 1977 (table 22). Using the 1977 reported figures, we can project the number of young adults, in various subgroups, who did admit to being current users of hallucinogens in 1977 and who will admit to current use in 1985, 1990 and 1995 (table 23). In 1985 the number of current young adult users of hallucinogens is projected to be approximately 706,000.

Table 22
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Hallucinogens: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	1.2%	1.4%
Males	2.3%	3.0%
Whites	1.8%	2.1%
Nonwhites	-	1.9%
Large Metropolitan Residents	1.2%	2.4%
Other Metropolitan Residents	2.5%	2.0%
Nonmetropolitan Residents	1.0%	1.7%

Table 23
Number of Young Adults 18 to 25 in Various Subgroups Using Hallucinogens Currently, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	228*	223	202	186
Males	495	483	438	406
Whites	586	562	501	456
Nonwhites	92	100	98	97
Large Metropolitan Residents	304	297	269	249
Other Metropolitan Residents	197	193	175	161
Nonmetropolitan Residents	74	170	154	142

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Type of User

In the 1977 NIDA survey, 7.0 percent of young adults described themselves as occasional users of hallucinogens; less than one percent described

themselves as regular users of hallucinogens. Using the 1977 data (table 24) we can project the number of young adults in various subgroups who did describe themselves as regular and occasional users of hallucinogens in 1977 and who will admit to this behavior in future years (table 25). In 1985, the number of young adults who will describe themselves as regular users of hallucinogens is projected to be approximately 32,000. The number of young adults who will describe themselves as occasional users in that same year is projected to be 2,241,000.

Table 24
Percent of Young Adults 18 to 25 in Various Subgroups Using Hallucinogens Regularly or Occasionally: 1976 and 1977 Surveys

Subgroups	1976 Regular User	1976 Occasional User	1977 Regular User	1977 Occasional User
Females	-	4.4%	-	4.6%
Males	-	6.9%	.2%	9.6%
Whites	-	6.1%	.1%	7.5%
Nonwhites	-	2.5%	-	4.5%
Large Metropolitan Residents	-	5.5%	.1%	6.1%
Other Metropolitan Residents	-	7.2%	.2%	9.1%
Nonmetropolitan Residents	-	3.5%	-	5.1%

Table 25
Number of Young Adults 18 to 25 in Various Subgroups Using Hallucinogens Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroup	1977 Regular	1977 Occasional	1985 Regular	1985 Occasional	1990 Regular	1990 Occasional	1995 Regular	1995 Occasional
Females	-	748	-	732	-	662	-	611
Males	33*	1,583	32	1,546	29	1,402	27	1,298
Whites	28	2,093	27	2,008	24	1,788	22	1,627
Nonwhites	-	218	-	236	-	232	-	230
Large Metropolitan Residents	13	773	12	756	11	685	10	633
Other Metropolitan Residents	20	897	19	877	17	794	16	734
Nonmetropolitan Residents	-	521	-	509	-	461	-	427

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Lifetime Prevalence

In 1977, 18.6 percent of the young adults surveyed by the National Institute on Drug Abuse admitted to having used cocaine at some time in the past. Applying this figure to population projections for young adults, we can project that approximately 5,953,000 young adults will admit to having used cocaine in 1985. The corresponding projections for 1990 and 1995, respectively, are 5,393,000 and 4,988,000.

Using prevalence rates reported in 1977 with a level straight-line projection technique, we can project the number of young adults, in various subgroups, who will have used cocaine in the future. Table 26 presents the 1976 and 1977 reported prevalence rates and table 27 presents projections of the number of young adults in various subgroups who did admit to having used cocaine in 1977 or who will admit to its use in 1985, 1990, and 1995.

Table 26
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Cocaine: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	9.1%	13.4%
Males	16.1%	24.5%
Whites	13.8%	18.8%
Nonwhites	8.2%	18.8%
Large Metropolitan Residents	16.6%	23.4%
Other Metropolitan Residents	13.1%	19.3%
Nonmetropolitan Residents	8.0%	10.9%

Table 27
Number of Young Adults 18 to 25 in Various Subgroups Who Had Used Cocaine, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	2,179*	2,131	1,929	1,781
Males	4,039	3,945	3,577	3,314
Whites	5,246	5,033	4,482	4,078
Nonwhites	910	985	970	963
Large Metropolitan Residents	2,966	2,899	2,626	2,428
Other Metropolitan Residents	1,903	1,859	1,685	1,558
Nonmetropolitan Residents	1,113	1,089	986	912

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Use in Past Month

Approximately two percent of the females and six percent of the males surveyed admitted to current use of cocaine in 1977 (table 28). Using the 1977 reported figures, we can project the number of young adults, in various subgroups, who did admit to being current users of cocaine in 1977 or who will admit to current use in 1985, 1990, and 1995 (table 29). In 1985 the number of current young adult users of cocaine is projected to be approximately 1,204,000.

Table 28
Percent of Young Adults 18 to 25 in Various Subgroups Using Cocaine Currently: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	1.5%	1.6%
Males	2.6%	5.9%
Whites	2.0%	3.5%
Nonwhites	3.1%	5.4%
Large Metropolitan Residents	4.1%	6.1%
Other Metropolitan Residents	1.6%	2.7%
Nonmetropolitan Residents	1.0%	1.5%

Table 29
Number of Young Adults 18 to 25 in Various Subgroups Using Cocaine Currently, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	260*	254	230	213
Males	973	950	861	798
Whites	977	937	834	759
Nonwhites	261	283	278	277
Large Metropolitan Residents	773	756	685	633
Other Metropolitan Residents	266	260	236	218
Nonmetropolitan Residents	153	150	136	125

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Type of Use

In the 1977 NIDA survey, 8.9 percent of young adults surveyed described themselves as occasional users of cocaine; less than one percent described themselves as regular users of cocaine. Using the 1977 data (table 30) we

can project the number of young adults in various subgroups who did describe themselves as regular and occasional users of cocaine in 1977 or who will admit to this behavior in future years (table 31). In 1985, the number of young adults who will describe themselves as regular users of cocaine is projected to be approximately 81,000. The number of young adults who will describe themselves as occasional users in 1985 is projected to be 2,849,000.

Table 30
Percent of Young Adults 18 to 25 in Various Subgroups Using Cocaine Regularly or Occasionally: 1976 and 1977 Surveys

Subgroups	1976		1977	
	Regular User	Occasional User	Regular User	Occasional User
Females	.1%	4.4%	-	5.3%
Males	.4%	9.2%	.5%	12.8%
Whites	-	7.1%	.1%	8.8%
Nonwhites	1.5%	4.4%	.8%	8.8%
Large Metropolitan Residents	-	9.5%	.5%	11.4%
Other Metropolitan Residents	.1%	7.2%	.2%	8.8%
Nonmetropolitan Residents	.7%	3.7%	-	5.3%

Table 31
Number of Young Adults 18 to 25 in Various Subgroups Using Cocaine Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroup	1977		1985		1990		1995	
	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional
Females	-	862	-	843	-	763	-	704
Males	82*	2,110	81	2,061	73	1,869	68	1,731
Whites	28	2,456	27	2,355	24	2,098	22	1,909
Nonwhites	59	423	42	461	41	454	41	451
Large Metropolitan Residents	63	1,445	62	1,412	56	1,279	52	1,183
Other Metropolitan Residents	20	868	19	848	17	768	16	710
Nonmetropolitan Residents	-	541	-	529	-	479	-	443

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

HEROIN

The validity of the survey data on heroin use is highly questionable due to severe underreporting of use. Therefore, the predictions presented below for young adults' use of heroin must be interpreted cautiously.

Lifetime Prevalence

In 1977, 3.2 percent of the young adults surveyed by the National Institute on Drug Abuse admitted to having used heroin at some time in the past. Applying this figure to population projections for young adults, we can predict that approximately 1,024,000 young adults will admit to having used heroin in 1985. The corresponding projections for 1990 and 1995, respectively, are 928,000 and 858,000.

Using prevalence rates reported in 1977 with a level straight-line projections technique, we can project the number of young adults, in various subgroups, who will have used heroin in the future. Table 32 presents the 1976 and 1977 reported prevalence rates and table 33 presents predictions of the number of young adults in various subgroups who did admit to having used heroin in 1977 or who will admit to its use in 1985, 1990 and 1995.

Table 32
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Heroin: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	2.2%	1.6%
Males	5.4%	5.7%
Whites	3.9%	3.3%
Nonwhites	2.2%	5.7%
Large Metropolitan Residents	4.4%	4.4%
Other Metropolitan Residents	4.7%	3.8%
Nonmetropolitan Residents	1.6%	2.1%

Table 33
Number of Young Adults 18 to 25 in Various Subgroups Who Had Used Heroin, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	260*	254	230	213
Males	940	918	832	771
Whites	921	883	787	716
Nonwhites	276	299	294	292
Large Metropolitan Residents	558	545	494	457
Other Metropolitan Residents	375	366	332	307
Nonmetropolitan Residents	256	210	190	176

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Use in Past Month

Less than one percent of the young adults surveyed admitted to current use of heroin in 1977 (table 34). Using the 1977 reported figures, we can project the number of young adults, in various subgroups, who did admit to being current users of heroin in 1977 or who will admit to current use in 1985, 1990 and 1995 (Table 35). In 1985, the number of current, young adult users of heroin is projected to be approximately 113,000.

Table 34
Percent of Young Adults 18 to 25 in Various Subgroups Using Heroin Currently: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	-	-
Males	-	.7%
Whites	-	.3%
Nonwhites	-	.8%
Large Metropolitan Residents	-	.3%
Other Metropolitan Residents	-	.5%
Nonmetropolitan Residents	-	-

Table 35
Number of Young Adults 18 to 25 in Various Subgroups Using Heroin Currently, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	-	-	-	-
Males	115*	113	102	95
Whites	84	80	72	65
Nonwhites	39	42	41	41
Large Metropolitan Residents	38	37	34	31
Other Metropolitan Residents	49	48	44	40
Nonmetropolitan Residents	-	-	-	-

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Type of Use

In 1977, less than one percent of the young adults surveyed described themselves as regular or occasional users of heroin. Using 1977 data (table 36), we can project the number of young adults, in various subgroups, who did describe themselves as regular or occasional users of heroin in 1977 and who will admit to this behavior in future years (table 37). In 1985 the

number of young adults who will describe themselves as regular users of heroin is projected to be approximately 48,000. The number of young adults who will describe themselves as occasional users in 1985 is projected to be 225,000.

Table 36
Percent of Young Adults 18 to 25 in Various Subgroups Using Heroin Regularly or Occasionally: 1976 and 1977 Surveys

Subgroups	1976		1977	
	Regular User	Occasional User	Regular User	Occasional User
Females	-	.4%	.3%	.4%
Males	-	.6%	-	1.0%
Whites	-	.6%	.1%	.3%
Nonwhites	-	.3%	.4%	2.7%
Large Metropolitan Residents	-	.6%	.5%	.5%
Other Metropolitan Residents	-	.4%	-	1.2%
Nonmetropolitan Residents	-	.5%	-	-

Table 37
Number of Young Adults 18 to 25 in Various Subgroups Using Heroin Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroup	1977		1985		1990		1995	
	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional
Females	43*	69	48	64	43	58	40	53
Males	-	165	-	161	-	146	-	135
Whites	28	84	27	80	24	72	22	65
Nonwhites	19	131	21	141	21	139	20	138
Large Metropolitan Residents	63	63	62	62	56	56	52	52
Other Metropolitan Residents	-	118	-	116	-	105	-	97
Nonmetropolitan Residents	-	-	-	-	-	-	-	-

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

OTHER OPIATES[5]

Lifetime Prevalence

In 1977, 13.1 percent of the young adults surveyed by the National Institute on Drug Abuse admitted to having used other opiates at some time in the past. Applying this figure to population projections for young adults, we can project that approximately 4,193,000 young adults will admit to having used other opiates in 1985. The corresponding projections for 1990 and 1995, respectively, are 3,799,000 and 3,153,000.

Using prevalence rates reported in 1977 with a level straight-line projection technique we can project the number of young adults, in various subgroups, who will have used other opiates in the future. Table 38 presents the 1976 and 1977 reported prevalence rates and table 39 presents projections of the number of young adults, in various subgroups, who did admit to having used other opiates in 1977 and who will admit to their use in 1985, 1990, and 1995.

Table 38
Percent of Young Adults 18 to 25 in Various Subgroups Who Had Used Other Opiates: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	8.9%	8.7%
Males	17.3%	17.8%
Whites	13.5%	13.2%
Nonwhites	12.8%	12.4%
Large Metropolitan Residents	15.0%	13.4%
Other Metropolitan Residents	16.8%	15.3%
Nonmetropolitan Residents	5.8%	8.6%

Table 39
Number of Young Adults 18 to 25 in Various Subgroups Who Had Used Other Opiates, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	1,415*	1,384	1,253	1,156
Males	2,934	2,866	2,599	2,407
Whites	3,683	3,534	3,147	2,863
Nonwhites	600	649	639	635
Large Metropolitan Residents	1,698	1,660	1,504	1,391
Other Metropolitan Residents	1,508	1,474	1,335	1,235
Nonmetropolitan Residents	878	859	778	719

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Use in Past Month

Less than one percent of the young adults surveyed admitted to current use of other opiates in 1977. Using the 1977 reported figures (table 40), we can project the number of young adults, in various subgroups, who did admit to being current users of other opiates in 1977 and who will admit to current use in 1985, 1990, and 1995 (table 41). In 1985, the number of current, young adult users of other opiates is projected to be 352,000.

Table 40
Percent of Young Adults 18 to 25 in Various Subgroups Using Other Opiates Currently: 1976 and 1977 Surveys

Subgroups of Young Adults	1976	1977
Females	.8%	.8%
Males	2.2%	1.4%
Whites	1.8%	1.2%
Nonwhites	.3%	.9%
Large Metropolitan Residents	1.1%	.6%
Other Metropolitan Residents	1.5%	1.7%
Nonmetropolitan Residents	2.0%	.5%

Table 41
Number of Young Adults 18 to 25 in Various Subgroups Using Other Opiates Currently, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroups of Young Adults	1977	1985	1990	1995
Females	130*	127	115	106
Males	231	225	204	189
Whites	279	268	238	217
Nonwhites	44	47	46	46
Large Metropolitan Residents	76	74	67	62
Other Metropolitan Residents	168	164	148	137
Nonmetropolitan Residents	51	50	45	42

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Type of Use

In 1977, 4.3 percent of the young adults surveyed described themselves as occasional users of other opiates. Using the 1977 data (table 42) we can project the number of young adults, in various subgroups, who did describe themselves as regular or occasional users of other opiates in 1977 and who will admit to this behavior in 1985, 1990, and 1995 (table 43). In 1985, the number of young adults who will describe themselves as regular users of other opiates is projected to be approximately 48,000. The number of young adults who will describe themselves as occasional users of other opiates in 1985 is projected to be 1,376,000.

Table 42
Percent of Young Adults 18 to 25 in Various Subgroups Using Other Opiates Regularly or Occasionally: 1976 and 1977 Surveys

Subgroups	1976		1977	
	Regular User	Occasional User	Regular User	Occasional User
Females	.1%	1.9%	.3%	2.8%
Males	-	5.4%	-	6.0%
Whites	.1%	4.0%	.2%	4.5%
Nonwhites	-	2.3%	-	3.3%
Large Metropolitan Residents	-	5.2%	.2%	3.2%
Other Metropolitan Residents	-	2.8%	.1%	6.3%
Nonmetropolitan Residents	.2%	3.4%	-	2.6%

Table 43
Number of Young Adults 18 to 25 in Various Subgroups Using Other Opiates Regularly or Occasionally, 1977 Survey, and Projections for 1985, 1990, and 1995

Subgroup	1977		1985		1990		1995	
	Regular	Occasional	Regular	Occasional	Regular	Occasional	Regular	Occasional
Females	43*	455	48	445	43	403	40	372
Males	-	989	-	966	-	876	-	812
Whites	56	1,256	54	1,205	48	1,073	43	976
Nonwhites	-	160	-	173	-	170	-	169
Large Metropolitan Residents	25	406	25	396	22	359	21	332
Other Metropolitan Residents	10	621	10	607	9	550	8	508
Nonmetropolitan Residents	-	266	-	260	-	235	-	218

*Numbers presented are in thousands, and are based on 1977 prevalence rates.

Summary

The projections of drug abuse presented in this chapter are based on 1977 reported rates of drug abuse. It should be noted that the preliminary results of the 1979 National Survey of Drug Abuse indicate an increase in drug abuse rates since 1977. Therefore, the projections for 1985, 1990, and 1995 presented herein are conservative. It can be expected that if straight-line projections of drug abuse were calculated using 1979 data, the number of young adult drug abusers in future years would be larger. However, the projections presented herein are adequate for broad planning purposes.

FOOTNOTES

[1] A sixth survey in this series was conducted in 1979; however, the data are not yet available for review.

[2] In 1977, 1976, and 1974 marijuana and hashish were treated as separate categories during the data collection phase. However, for purposes of this report, these two substances have been combined under the drug category "marijuana."

[3] In 1977 and 1976 inhalants were defined as "Glue or some other substances that people inhale for kicks or to get high. Besides glue, there are things like gasoline, some aerosols, nitrous oxide, amyl nitrite (which is also called 'poppers') and other solvents."

[4] In 1977 and 1976 hallucinogens were defined as "LSD and other hallucinogens like mescaline, peyote, psilocybin, and DMT."

[5] In 1977 and 1976 other opiates were defined as "Opium or other drugs containing opium and its derivatives. They are usually in the form of prescription cough syrups, pain killers, or stomach medicines--things like morphine, codeine, dilaudid, demerol, and paregoric. Although they are frequently prescribed for medical reasons, these questions ask about the use of these drugs for nonmedical purposes--that is, for kicks or for highs, to gain insight or pleasure." Also included were hycodan, laudanum, and talwin.

Chapter 5

Overview of Drug Abuse Trends and Recommendations for Additional Research

Overview of Drug Abuse Trends

Previous research indicates there is a relationship between nonmedical use of drugs and age, with the highest percentage of drug abusers included in the young adult (18-25 years old) population. The population projections presented in appendix A to this report clearly point to the decline in the size of the young adult population between now and 1995. Given these two facts, it is reasonable to assume that the number of young adult drug abusers will also decline between now and 1995.

This study is based on the assumption that rates of drug abuse reported in 1977 will remain stable; and, therefore, the number of young adult drug abusers can be expected to decline continually between the present and 1995. This trend is demonstrated by many of the tables presented in chapter 4. A decline in the number of young adult drug abusers can be expected across most subgroups (e.g., both males and females) with one notable exception. The size of the nonwhite young adult population, unlike other subgroups of young adults, is projected to grow in future years. Much of this growth can be attributed to the changing structure of the Hispanic population. In fact, demographers generally agree that American residents of Hispanic origin will probably outnumber American Blacks before 1990. While consistently high birth rates contribute to the rapid expansion of the Hispanic population, illegal immigration is the largest single growth factor, accounting since 1970 for more than 50 percent of the population increase. It is difficult to estimate the total significance and extent of illegal immigration as a growth factor, but it is certainly a major one. Historically, a very large proportion of these illegal immigrants have been young males and there is no reason to believe that this trend will not continue.

While the number of young adult drug abusers, overall, may decline in the next decade, it is difficult to estimate with any precision the shape of the drug abuse problem among this group. If earlier trends continue to repeat themselves, the following patterns of drug abuse may emerge:

- Regular use of marijuana will be on the upswing but the percentage of occasional users should stabilize.
- Use of hallucinogens should not change dramatically.
- The percentage of cocaine users, particularly occasional users, will increase over the next decade.
- The percentage of young adults using heroin and other opiates should not change dramatically.

These observations should be interpreted cautiously, of course, because there are any number of demographic and sociological phenomena that could influence future drug abuse patterns among young adults. As chapter 2 of this report suggests, fertility rates in the near future, mortality rates among young adults, new waves of immigration, the extent of geographic mobility experienced within this country, the changing family structure, and career patterns for young adults should be monitored closely in the coming years. In order to support this effort, an alternative methodology for developing projections of drug abuse would need to be developed.

Additional Work to Be Accomplished

Several alternative approaches to projecting drug abuse in the future were reviewed in designing this study. The most straightforward approach to making projections is to apply the current levels of reported drug abuse to population projections in order to estimate the numbers of drug abusers at future points in time.

A second approach is to use data collected at several points in time to document trends. When such data are available, one can study the direction and magnitude of change in the level of drug abuse over time and assume that this same pattern will continue in the future. With this approach one could modify the most recently reported level of drug abuse and multiply the modified percentage by population projections to estimate the number of drug abusers in the future.

Using a third approach, one could identify a number of demographic and sociological issues which might potentially affect future patterns of drug abuse. Each issue could be analyzed and a set of hypotheses developed which express the relationship between drug abuse and changing social phenomena. Statistical equations could be developed to express these relationships; and these equations, factored with population projections, would generate another set of projections of future drug abuse.

Within the scope of this study and the confines of the drug abuse data bases already established, primarily the first approach was used to develop the drug abuse projections presented here. This approach produces modest projections which will be useful for planning drug prevention and treatment strategies over the next decade. At the same time, this approach and the second one described above have two major limitations:

- o They assume that current trends will continue, a sometimes misleading assumption; and
- o They do not account for other significant demographic and sociological changes in the future.

Because the demographics of the 1970's were surprising to many--baby boom turned baby bust, population redistributions from North to South, shrinkage in the average household size, and significant increases in the number of females in the work force--it is important to anticipate similar changes in the 1980's in an effort to improve the reliability of projections of future drug abuse. The modeling technique, presented as a third projection technique above, would take into consideration a range of demographic

and sociological issues. Such an approach would increase the accuracy with which changing drug abuse patterns over the next decade can be anticipated. This approach would also make clear the critical demographic and sociological issues which should be monitored and tracked on a periodic basis over the next 10 to 15 years as both short- and long-term plans are discussed. Additionally, development of such a model would enable us to plot alternative changes in drug abuse patterns in future years. The review of population trends, the analysis of existing drug abuse data sets, and the conservative projections of drug abuse presented in this report represent important steps in this direction.

Annotated Bibliography of Selected Materials on Demographic Trends and Forecasting Techniques

Bane, Mary Jo
1976

Here to Stay: American Families in the Twentieth Century. New York: Basic Books, 195 pp.

Bane shows, by analyzing demographic and survey data, that the American family is here to stay, albeit in a somewhat altered form. Policy implications are discussed.

Barclay, George W.
1958

Techniques of Population Analysis. New York: Wiley, 305 pp.

Standard textbook in demographic techniques. Less detailed than Shryock and Siegal (1975) and requires less mathematical background than Keyfitz (1977).

Bean, Frank D., and W. Parker Frisbee
1978

The Demography of Racial and Ethnic Groups. New York: Academic Press, 314 pp.

Contains several useful articles on blacks and Hispanics. Topics covered include residential segregation, education, fertility, mortality, and households.

Birch, David
1978

Statement, House Select Committee on Population, Hearings, Consequences of Changing U.S. Population: Vol. 3, Population Movement and Planning.

Growth in employment and immigration is due more to creation and growth of firms than relocation over long distances. Living preferences as well as the cost of doing business influence where firms locate.

Biggar, Jeanne C.
1979

The Sunning of America: Migration to the Sunbelt. Population Bulletin, Vol. 34, No. 1 (March), Washington, Population Reference Bureau, 39 pp.

A comprehensive overview of this important demographic shift. Includes a discussion of economic and political implications.

DaVanzo, Julie
1978

U.S. Internal Migration: Who Moves and Why? Testimony to U.S. House Select Committee on Population, Consequences of Changing U.S. Population: Population Movement and Planning. Washington: USGPO.

Individuals who migrate improve their earnings and lessen their incidence of unemployment. For labor markets, migration is an equilibrating force. Public policy should be directed at making migration more effective.

Easterlin, Richard
1978

What Will 1984 be Like? Socioeconomic Implications of Recent Twists in the Age Structure. Demography, 15:397-432.

A rise in the relative number of young males since 1960 has contributed to a number of social problems, including increased unemployment, accelerating inflation, and higher levels of divorce, suicide, crime, and political alienation. "The U.S. is now at the start of a new period of growing scarcity of young adults as a result of the birth rate decline that set in after 1960. This implies that the 1980's will see a turnaround in a wide variety of these social, political and economic conditions."

Farley, Reynolds
1977

Residential Segregation and Urbanized Areas of the United States in 1970: An Analysis of Social Class and Racial Differences. Demography, 14:497-518.

"Levels of social class segregation varied little from one urbanized area to another and were about the same in central cities and suburban rings. Racial residential segregation was much greater than the segregation of social classes within either the black or white communities. The extent of racial residential segregation does not vary by educational attainment, occupation or income."

343-353 O - 81 - 6

Flaim, Paul O., and Howard N. Fullerton, Jr.
1978

Labor Force Projections to 1990: Three Possible Paths. Monthly Labor Review, (December):25-35.

All three rates of projected growth to 1990 show a drop from the 1970-77 pace. Projections are given by age and sex based on Census Bureau projections for the total population.

Francese, Peter K.
1979

The 1980 Census: The Counting of America. Population Bulletin, Vol. 34, No. 4 (September), Washington: Population Reference Bureau.

A good introduction to the 1980 Census. Includes discussions of planning for the census, how it will be conducted and census products and services.

Glick, Paul C.
1978

The Future of the American Family. Testimony before the House Select Committee on Population, Consequences of Changing U.S. Population: Baby Boom and Bust. Washington: USGPO.

Changes in American family life in the next two decades will be less than in the last two. Documents the growth of the number of children living in single parent households, but points out that 79 percent of all children under 18 live with two parents.

Greenberg, Michael R., et al.
1978

Local Population and Employment Projection Techniques. New Brunswick: Center for Urban Policy Research, 277 pp.

Includes overview and presentation of detailed methods, including computer programs.

Guest, Avery
1979

Patterns of Suburban Population Growth, 1970-75. Demography, 16:401-16.

Proximity of central city and age of central city are both positively associated with net population loss for suburbs.

Keely, Charles B.
1977

Counting the Uncountable: Estimates of Undocumented Aliens in the United States. Population and Development Review, 3:473-81.

Reviews various estimates of stock and flow and problems involved in developing sound estimates. Keely is writing a more up-to-date account of this problem for American Demographics, which will be published in 1980.

Keyfitz, Nathan
1977

Applied Mathematical Demography. New York: Wiley, 388 pp.

Matras, Judah
1973

Populations and Societies. Englewood Cliffs: Prentice Hall, 550 pp.

A standard text for undergraduate population courses. Contains considerable historical and comparative material, as do most such works, but Matras is more thorough on quantitative demographic analysis.

Morrison, Peter A.
1978

The U.S. Population's Changing Regional Distributions: Trends and Implications. Testimony to House Select Committee on Population, Consequences of Changing U.S. Population: Baby Boom and Bust.

Good overview of the population changes resulting from current trends in internal migration. Some areas will experience population decline while others continue to grow at rapid rates.

National Center for Education Statistics
1978

Projections of Education Statistics to 1986-87. Washington: USGPO, 184 pp.

Chapter 2 gives enrollment projections for all levels of education. Chapter 3 projects enrollment by degree subject area. New projections will be published in 1980.

Oak Ridge Associated Universities
1977

Population Forecasting for Small Areas. Oak Ridge, Tennessee: Oak Ridge Associated Universities, 90 pp.

A conference report containing papers on different methods of forecasting and applications for energy plant siting, education and transportation planning, and State health care planning and development.

Pittenger, Donald B.
1979

How to Evaluate Population Forecasts. American Demographics, February, pp. 33-35.

Users of population forecasts should know which parts of a forecasting model are buttressed by theory, which parts are simply empirical, and which parts represent guesswork.

Reynolds, Reid T.
1979

Demographic Models. American Demographics, Vol. 1, No. 10 (November):32-33.

Discusses the application of econometric forecasting techniques to population projections for separate components of the population and subnational areas. Demographic models are now available from several private sources and are being developed by Federal and State agencies.

Reynolds, Reid T., Bryant Robey, and Cheryl Russell
1980

The Demographics of the 1980s. American Demographics. Vol. 2, No. 1 (January).

Several important demographic trends of the 1970's are projected to 1990. Draws together projections from several different Federal agencies and evaluates certainty of these projections. Ten charts.

Rice, Dorothy P.
1979

Long Life to You. American Demographics, Vol. 9, No. 9 (October):9-15.

After slow improvements during the 1960's, death rates have declined more rapidly in recent years. If death rates improve in the next 25 years as rapidly as in the past decade, we can expect a decrease in the death rate for all ages

combined of 9 percent, with the greatest improvement for those under 20 and over 45.

Rogers, Andrei
1968

Matrix Analysis of Interregional Population Growth and Distribution. Berkeley: University of California Press, 119 pp.

The application of matrix algebra and multiregional demographic forecasting.

Shryock, Henry S. and Jacob S. Siegal
1975

The Methods and Materials of Demography. 2 Vols. Washington: USGPO, 888 pp.

Discussion of the nature and quality of census data on immigration.

Siegal, Jacob S.
1978

Collection and Analysis of Immigration Data at the Census Bureau. Testimony to the House Select Committee on Population, Immigration to the United States.

Slater, Courtney
1980

Pieces of the Puzzle. American Demographics, Vol. 2, No. 2 (February).

Changes in household size and composition have affected income trends in recent years.

Steinberg, Joseph (ed.)
1979

Synthetic Estimates for Small Areas. Statistical Workshop Papers and Discussion. NIDA Research Monograph 24. Washington: USGPO, 282 pp.

Papers describing and evaluating a new technique for making estimates of a "target statistic" (e.g., level of drug abuse) for specific subnational areas using descriptive data for the area (e.g., population estimates by age and sex for counties) in combination with average values of the target statistic for national or regional territory (e.g., drug abuse estimates from the National Surveys of Drug Abuse).

U.S. Bureau of the Census
1975a

Historical Statistics of the United States: Colonial Times to 1970. Two Parts. Washington: USGPO, 1298 pp.

Comprehensive collection of statistical data for the U.S. Chapter A--Population; Chapter B--Vital Statistics; Chapter C--Migration; Chapter D--Labor; Chapter H--Social Statistics.

U.S. Bureau of the Census
1975b

Coverage of the Population in the 1970 Census and Some Implications for Public Programs. Current Population Reports Series P-23, No. 56.

A detailed assessment of the undercount problem in the 1970 Census.

U.S. Bureau of the Census
1977a

Reference Manual on Population and Housing Statistics from the Census Bureau. Washington: USGPO, 146 pp.

A comprehensive introduction to demographic data available from the Census Bureau. Useful discussion of 1970 Census concepts and methods.

U.S. Bureau of the Census
1977b

Projections of the Population of the United States 1977 to 2050. Current Population Reports, Series P-25, No. 704.

The most recent Census Bureau projections of the total U.S. population by age, sex, and race. Three projection series are given to 2050. Each series assumes net annual immigration of 400,000 and gradual improvements in mortality. Series I assumes a gradual transition to a total fertility rate of 2.7; Series II assumes 2.2 (replacement level fertility); and Series III assumes 1.7. The bureau does not anticipate releasing new projections until after results of the 1980 Census have been analyzed.

U.S. Bureau of the Census
1978

Statistical Abstract of the United States: 1978. Washington: USGPO, 1011 pp.

An extremely valuable compendium of statistics gathered by various Federal agencies. Data relevant to demographic trends are located in sections 1-5, 13 and 14. The sources for more detailed information on each statistical series are mentioned in chapter introductions and footnotes to tables.

U.S. Bureau of the Census
1979a

Illustrative Projections of State Populations by Age, Race and Sex: 1975 to 2000. Current Population Reports, Series P-25, No. 796.

Uses fertility and mortality assumptions of the Series II projections (U.S. Bureau of the Census, 1977b). State population projections are based on two different assumptions about interstate migration. Series II-A assumes a continuation of the 1965-75 rates; Series II-B uses the 1970-75 rates. Series II-B shows lower rates of population growth for the Northeast and North Central Regions.

U.S. Bureau of the Census
1979b

Population Profile of the United States: 1978. Current Population Reports, Series P-20, No. 336.

A useful collection of findings from the Current Population Survey. Issued annually.

U.S. Bureau of the Census
1979c

Projections of the Number of Households and Families: 1979 to 1995. Current Population Reports, Series P-25, No. 805.

Four series of projections based on changes in marital status and household status since 1964.

U.S. House of Representatives, Select Committee on Population
1978

Hearings and Reports. Washington: USGPO.

Of the 10 volumes of hearings the most pertinent are: Consequences of Changing U.S. Population--Vol. I Demographics of Aging; Vol. II Baby Boom and Bust; and Vol. III Population Movement and Planning; and Immigration to the United States. The most pertinent reports are Fertility and Contraception in the U.S., Legal and Illegal Immigration, and the Final Report.

Several of the background papers prepared by witnesses are cited in this bibliography by author.

Westoff, Charles F.
1978

Some Speculation on the Future of Marriage and the Family. Family Planning Perspectives, Vol. 10, No. 2:79-83.

Foresees a transition to zero population growth in the next 50 years. Low fertility can be attributed to the availability of and use of more effective contraception and greater availability of abortion. ". . . there are reasons to believe that some subsidization of reproduction may eventually become necessary."

Zuiches, James J., and David L. Brown
1978

The Changing Character of the Nonmetropolitan Population, 1950-75. In Thomas R. Ford, Rural U.S.A.: Persistence and Change. Ames: Iowa State University Press, pp. 55-72.

Discusses various characteristics of the nonmetropolitan population. A good background for understanding the recent resurgence of some nonmetropolitan areas.

Drug Abuse Data Sources

Abelson, H.; and Atkinson, R. Public Experience with Psychoactive Substances. Prepared for the National Institute on Drug Abuse by Response Analysis Corporation, Princeton, New Jersey, and Social Research Group, George Washington University, 1975.

Abelson, H.; Cohen, R.; and Schrayer, D. Public attitudes toward marihuana. Prepared by Response Analysis Corporation. In Marihuana: A Signal of Misunderstanding. First Report of the National Commission on Marihuana and Drug Abuse. Appendix Vol. II. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., March 1972.

Abelson, H.; Cohen, R.; Schrayer, D.; and Rappeport, M. Drug Experience, Attitudes and Related Behavior Among Adolescents and Adults. Prepared for the National Institute on Drug Abuse by Response Analysis Corporation, Princeton, New Jersey, and Social Research Group, George Washington University, 1973.

Abelson, H.; and Fishburne, P. Nonmedical Use of Psychoactive Substances: 1975/6 Nationwide Study Among Youth and Adults. Prepared for the National Institute on Drug Abuse by Response Analysis Corporation, Princeton, New Jersey, and Social Research Group, George Washington University, 1976.

Abelson, H.; Fishburne, P.; and Cisin, I. National Survey on Drug Abuse: 1977 - A Nationwide Study - Youth, Young Adults, and Older People. Prepared for the National Institute on Drug Abuse by Response Analysis Corporation. DHEW Pub. No. (ADM)78-618. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Broecker, L., and Berg, D. Illicit Use of Dangerous Drugs in the United States. A Compilation of Studies, Surveys and Polls. Washington, D.C.: Department of Justice, Drug Control Division of the Bureau of Narcotics and Dangerous Drugs, 1972.

Drug Enforcement Administration. Drug Enforcement Statistical Report. Statistics Compiled Through September 1979. Washington, D.C.: Drug Enforcement Administration, 1979.

Drug Enforcement Administration. Regional Drug Situation Analyses Through September 1979. Northeastern, North Central, Southeastern, South Central, and Western Regions. Washington, D.C.: Drug Enforcement Administration, 1979.

Glenn, W.; and Richards, L. Recent Surveys of Nonmedical Drug Use: a Compendium of Abstracts. DHEW Pub. No. (ADM)75-139. Rockville, Maryland: National Institute on Drug Abuse, 1974.

Johnston, L. D. Drugs and American Youth. Ann Arbor, Michigan: University of Michigan, Institute for Social Research, 1973.

Johnston, L. D.; Bachman, J. G.; and O'Malley, P. M. Drug Use Among American High School Students 1975-1977. Prepared for the National Institute on Drug Abuse by the Institute for Social Research, University of Michigan. DHEW Pub. No. (ADM)78-619. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1977.

Johnston, L. D.; Bachman, J. G.; and O'Malley, P. M. Drugs and the Class of '78: Behaviors, Attitudes, and Recent National Trends. Prepared for the National Institute on Drug Abuse by the Institute for Social Research, University of Michigan. DHEW Pub. No. (ADM)79-877. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979a.

Johnston, L. D.; Bachman, J. G.; and O'Malley, P. M. 1979 Highlights Nation's High School Students, Five Year National Trends. Prepared for the National Institute on Drug Abuse by the Institute for Social Research, University of Michigan. DHEW Pub. No. (ADM)81-930. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1979b.

National Institute on Drug Abuse. An Index of the Number of Drug Abusers in States and Major Urban Areas. Prepared by Response Analysis Corporation, Princeton, New Jersey, 1975.

National Institute on Drug Abuse. Drug Watch, July 1977. DHEW Pub. No. (ADM)77-503. Rockville, Maryland: the Institute, 1977.

National Institute on Drug Abuse. Data From the National Drug Abuse Treatment Utilization Survey (NDATUS), April 1978, Series F, No. 6. DHEW Pub. No. (ADM)79-829. Rockville, Maryland: the Institute, 1978.

National Institute on Drug Abuse and Drug Enforcement Administration. Dawn Quarterly Report April-June 1978. Prepared by IMS America, Ltd., Ambler, Pennsylvania, 1978.

National Institute on Drug Abuse. Trend Report January 1975-September 1978. Data From the Client Oriented Data Acquisition Process. Series E, No. 10. DHEW Pub. No. (ADM)79-845. Rockville, Maryland: the Institute, 1979.

National Institute on Drug Abuse. Annual Data 1978. Data From the Client Oriented Data Acquisition Process. Series E, No. 12. DHEW Pub. No. (ADM)80-866. Rockville, Maryland, the Institute, 1979.

O'Donnell, J. A.; Voss, H. L.; Clayton, R. R.; Slatin, G. T.; and Room, R. G. W. Young Men and Drugs — A Nationwide Survey. National Institute on Drug Abuse Research Monograph 5. DHEW Pub. No. (ADM)76-311. Washington, D.C.: Supt. of Docs., U.S. Govt. Print. Off., 1976.

Appendix A

Population Projections for Young Adults for 1985, 1990, and 1995

APPENDIX A
POPULATION PROJECTIONS FOR
YOUNG ADULTS FOR 1985, 1990, AND 1995
(IN THOUSANDS)

	1985	1990	1995
Total Population	232,880	243,513	252,750
Pop. 12-17	20,909	19,240	21,956
12	3,163	3,280	3,894
13	3,354	3,190	3,835
14	3,728	3,189	3,801
15	3,644	3,236	3,643
16	3,526	3,129	3,450
17	3,494	3,216	3,333
18-21	15,444	14,506	12,995
18	3,606	3,426	3,262
19	3,740	3,769	3,232
20	4,025	3,754	3,338
21	4,073	3,557	3,163
22-25	16,394	14,491	13,820
22	4,065	3,457	3,185
23	4,069	3,488	3,319
24	4,155	3,696	3,724
25	4,105	3,850	3,592
26+	138,598	149,738	157,543

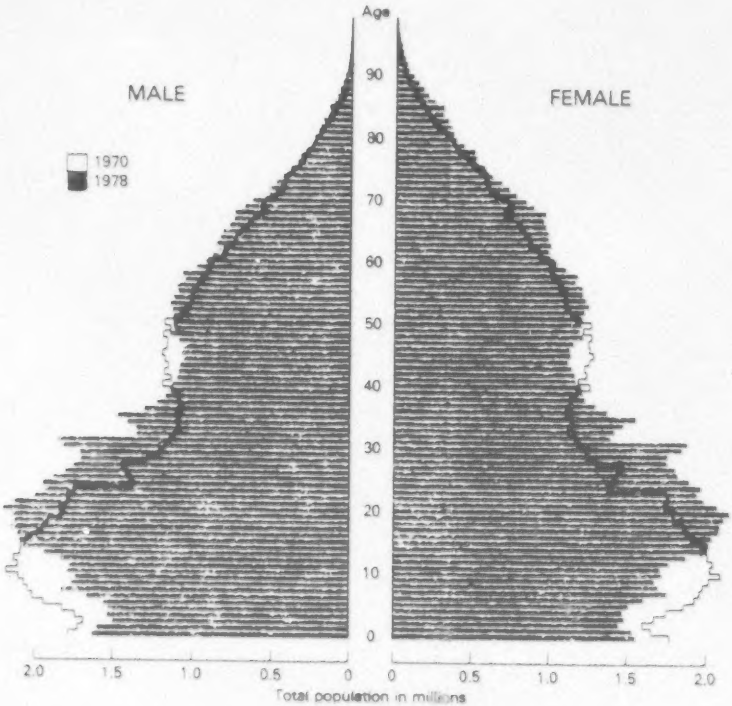
Nonwhite (cont'd)		1985	1990	1995
	20-24	3,325	3,165	3,236
	25	642	650	637
Total	18-25	32,009	28,998	26,813
Large Metro		12,387	11,222	10,377
Other Metro		9,634	8,728	8,070
Nonmetro		9,987	9,047	8,366

Appendix B

Charts and Tables Depicting
Various Demographic Trends

Chart I. Population Pyramids: 1970-1978

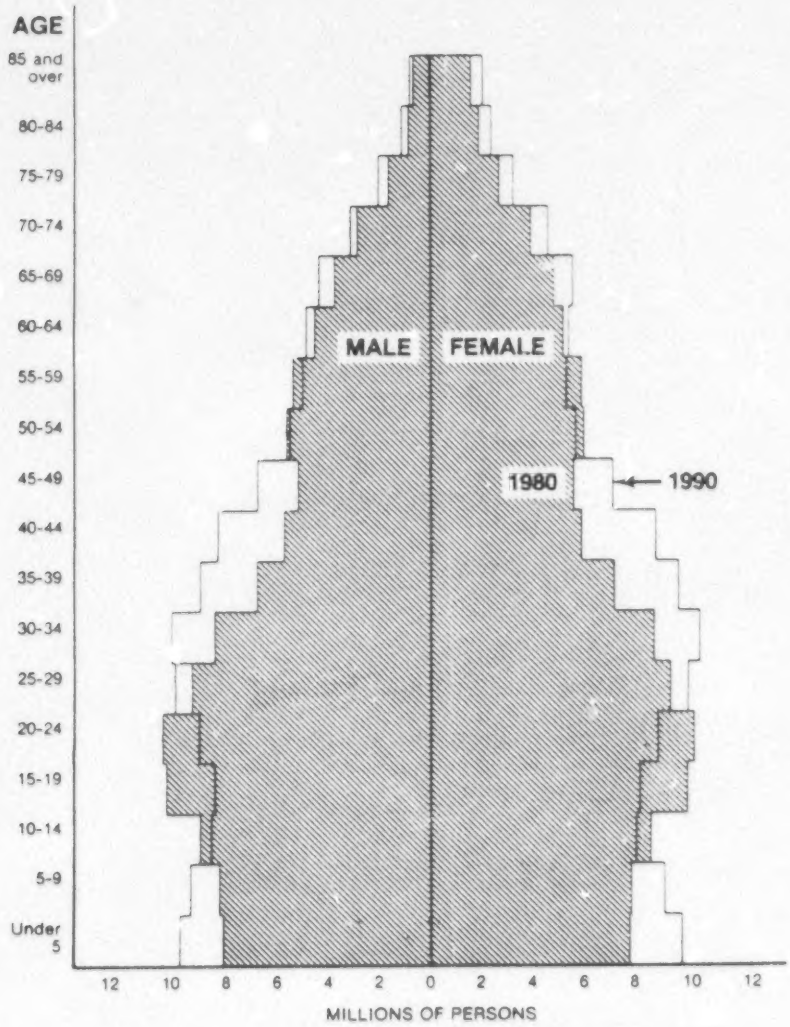
Distribution of the Estimated Total Population of the United States Including Armed Forces Overseas, by Age and Sex: April 1, 1970 to July 1, 1978



Source: U.S. Bureau of the Census, Current Population Reports, P-25, No. 800, 1979.

Chart II. Projected Population Pyramids: 1980 & 1990

Distribution of the Total Population by Age and Sex
Projections for 1980 and 1990



Sources: Bureau of the Census

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Chart III

PROJECTIONS OF THE TOTAL POPULATION BY AGE AND SEX 1980 AND 1990
(numbers in thousands)

	1980			1990			PERCENT CHANGE FOR TOTALS 1980 TO 1990
	TOTAL	MALE	FEMALE	TOTAL	MALE	FEMALE	
All Ages	222,159	108,223	113,936	243,513	118,490	125,023	+9.6
Under 5	16,020	8,201	7,819	19,437	9,963	9,947	+21.3
5 - 9	16,096	8,225	7,871	19,040	9,754	9,286	+18.3
10 - 14	17,800	9,078	8,722	16,718	8,564	8,154	(-6.1)
15 - 19	20,609	10,468	10,141	16,777	8,546	8,231	(-18.6)
20 - 24	20,918	10,520	10,398	17,952	9,033	8,920	(-14.2)
25 - 29	18,930	9,438	9,492	20,169	10,047	10,123	+6.6
30 - 34	17,242	8,555	8,687	20,917	10,377	10,540	+21.3
35 - 39	14,033	6,869	7,164	19,261	9,470	9,790	+37.3
40 - 44	11,688	5,691	5,996	17,331	8,494	8,836	+48.3
45 - 49	11,030	5,383	5,646	13,889	6,770	7,119	+25.9
50 - 54	11,668	5,645	6,023	11,422	5,529	5,893	(-2.1)
55 - 59	11,401	5,458	5,944	10,416	5,044	5,372	(-8.6)
60 - 64	9,797	4,583	5,214	10,360	4,901	5,459	+5.8
65 - 69	8,700	3,859	4,841	10,022	4,471	5,551	+15.2
70 - 74	6,793	2,853	3,940	7,782	3,281	4,501	+14.6
75 - 79	4,324	1,698	2,626	5,501	2,148	3,353	+27.2
80 - 84	2,816	989	1,827	3,639	1,264	2,375	+29.2
85 and over	2,294	709	1,585	2,881	836	2,045	+25.6
Median Age	30.2	29.0	31.5	32.8	31.6	33.9	+8.6

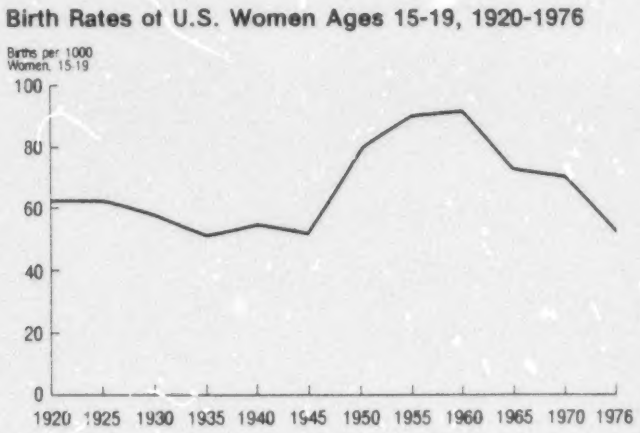
Chart IV

PERSONS LIVING ALONE BY AGE
1970 AND 1978
(numbers in thousands)

AGE	1970 Male	1970 Female	1978 Male	1978 Female	Percent Increase 1970 to 1978 Male	Percent Increase 1970 to 1978 Female
Total living alone	3,532	7,319	6,352	10,363	79.4%	41.6%
Under 25	274	282	870	741	217.5	162.8
25 to 34	535	358	1,675	1,022	213.1	185.5
35 to 44	398	313	825	455	107.3	45.4
45 to 64	1,152	2,470	1,543	2,784	33.9	12.7
65 and Over	1,174	3,897	1,439	5,362	22.6	37.6

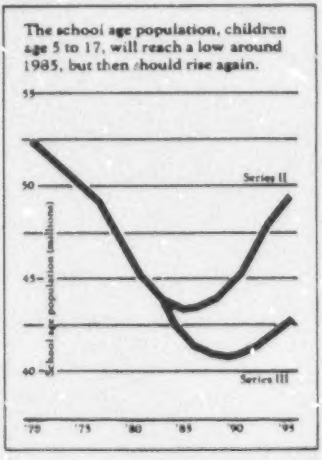
Source: Bureau of the Census

Chart V. Teenage Birth Rates



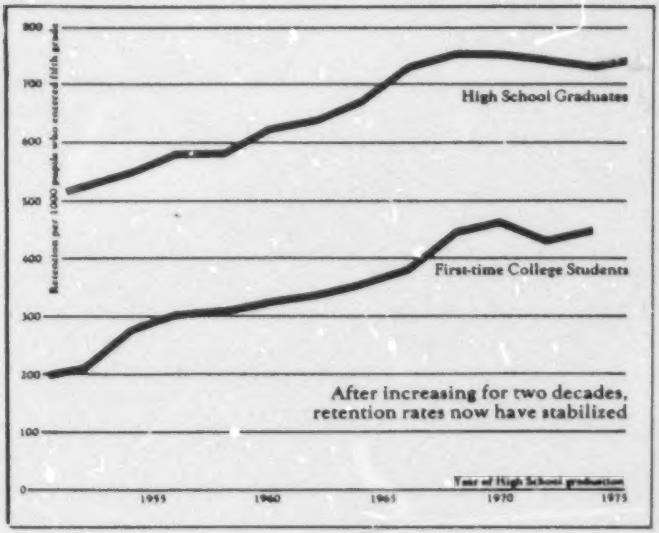
Source: National Center for Health Statistics

Chart VI. Projected School-Age Population



Source: U.S. Bureau of the Census

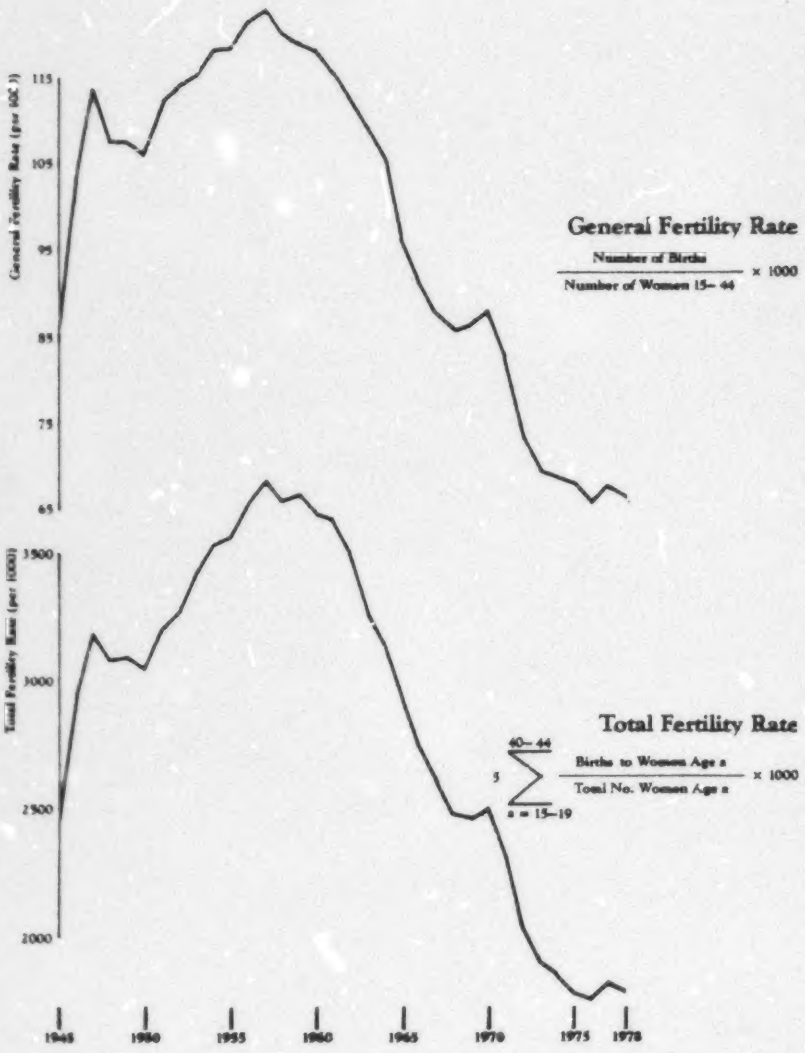
Chart VII. Retention Rates



Source: National Center for Education Statistics

Chart VIII. The Baby Boom and Baby Bust

Measures of Fertility



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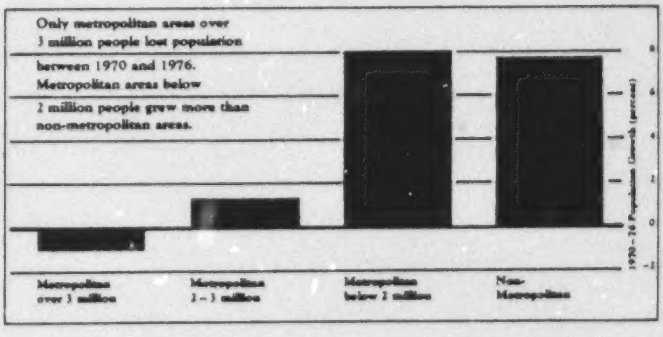
Charts IX and X. Metropolitan and Non-Metropolitan Growth

Where We Live

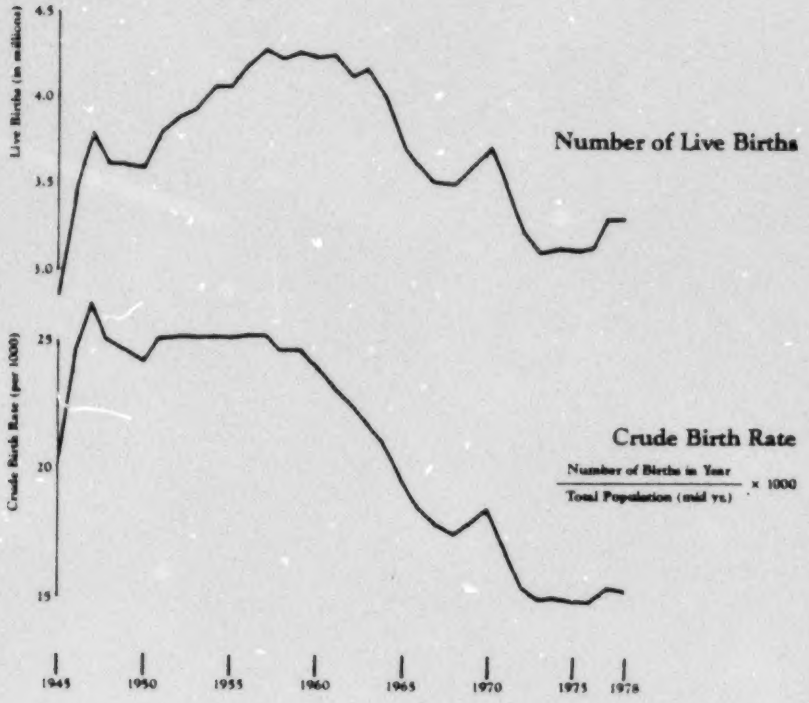
Most Americans live in metropolitan areas, but since 1970 central cities have lost population and suburbs have continued to grow.

Source: Census Bureau


Only metropolitan areas over 3 million people lost population between 1970 and 1976. Metropolitan areas below 2 million people grew more than non-metropolitan areas.
Metropolitan over 3 million
Metropolitan 1–3 million
Metropolitan below 1 million
Non-Metropolitan

Source: Census Bureau

Chart VIII. The Baby Boom and Baby Bust (continued)



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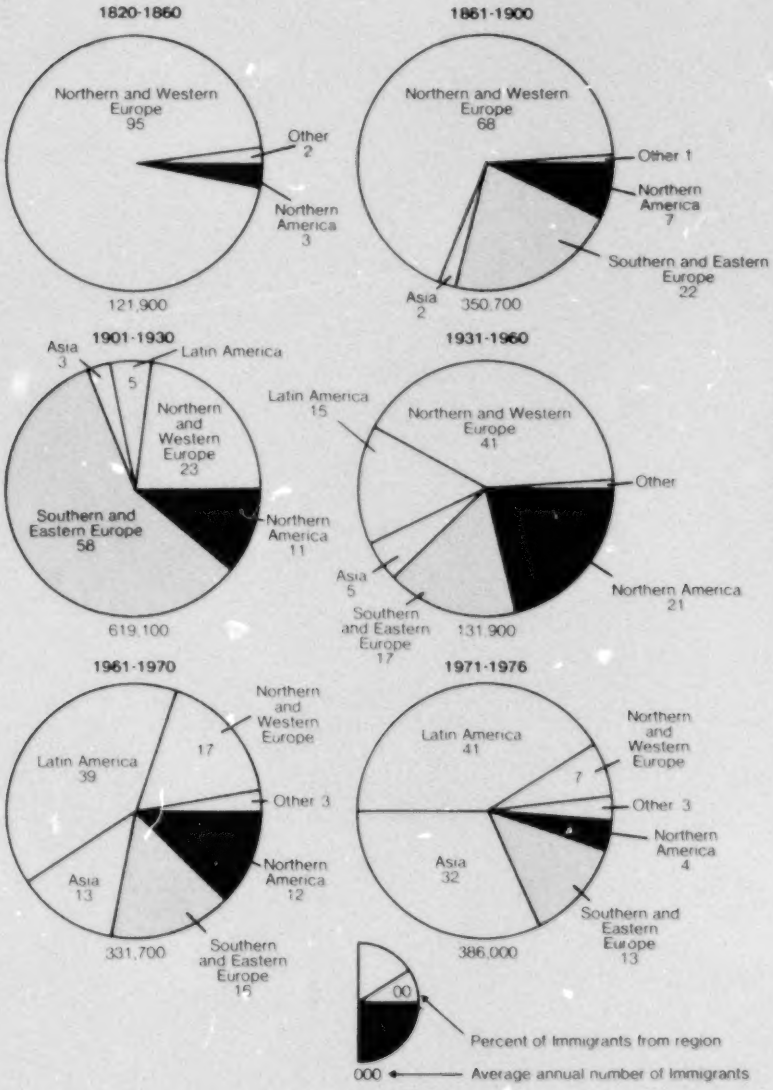
U.S. Immigrants by Region of Origin, 1820-1976



Source: Leon F. Bouvier, with Henry S. Shryock and Harry W. Henderson, "International Migration: Yesterday, Today and Tomorrow," Population Bulletin, vol. 32, No. 4. Courtesy of the Population Reference Bureau, Inc., Washington, D.C., Sept. 1977, pp. 24, 25.

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